FLASHES AND PLUGS

OPERATOR BLOCKS CUPID. Cupid got the brushoff recently when a London telephone operator failed to come forth with the necessary cooperation.

Marvin Kite, who served in the U. S. Army Air Forces in England, wanted to marry a pretty English girl, Doris Press of London, by trans-Atlantic telephone. But when he put through a call November 6 to arrange details, the London operator told him that as his fiancee did not have a telephone, she would be unable to connect them.

When he appealed that a messenger be sent to get Miss Press to the telephone, the operator replied: "I'm sorry, sir, but I cannot. It would have to be an emergency, sir."

So Marvin sent a cablegram asking Doris to call him. Object—matrimony.

The volunteer Pub, the London community social center where Doris and Marvin used to play darts, offered its telephone, prettied up with chrysanthemums, and barred the public for the night, and on November 11, she in a pub and he, in Atlanta, Ga., exchanged wedding vows.

• • •

AT LONG LAST. A direct-mail sales promotion by the Stromberg-Carlson advertising department in 1907 offered free catalogs to Independent telephone companies who would fill out an enclosed postal card and return it.

This week the Flathead Independent Telephone Co. of Ronan, Mont., filled out the 39-year old tempter and mailed it to the advertising department in Rochester, N. Y.

Stromberg-Carlson's telephone catalog editor, Walter Brown, who remembers the 1907 promotional piece, said that the catalog, much revised in the last 39 years, would be sent the applicant.

• • •

LADY'S LINGERIE STUMPS POLICE. The case of missing panties—315 pairs of them—prompted an Oklahoma City, Okla., veteran police clerk, Earl Cunningham, to cry for help.

After the arrest of a man with 315 pairs of women's panties stolen from clotheslines throughout the city, the ladies began telephoning Mr. Cunningham, clerk of the police stolen goods department, to see if their property was among that recovered.

The embarrassed clerk confessed to Police Chief L. J. Hilbert that he didn't know a briefy from any other kind of lingerie. Also, he said, how should he know what color is "tea rose"?

The chief called Jean McGinnis, pretty police report clerk, to the rescue.

• • •

FLOATING TELEPHONE EXCHANGE. The ill-fated Lusitania of World War I, states a contributor to this column, was the first instance of a complete private branch exchange, with regular exchange facilities, on an ocean-going steamer.

The installation consisted of 89 stations and 10 exchange lines, connected to a switchboard having the capacity for 200 stations and 20 exchange lines. Only the regal and first class staterooms, the cabin of the ship's doctor, purser and chief steward and the bureau were so equipped.

The instruments were fashioned of metal, gilded or silvered to harmonize with the cabins' decorating scheme. The switchboard was designed to grip the receiver and prevent it from falling or knocking against the side of the instrument when the ship rolled.

TELEPHONY

The Journal of the Telephone Industry

NOVEMBER 23, 1946

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IN A TELEPHONE?

—OR possibly you're looking for a telephone that keeps inventory down to a rock bottom investment?

Then, new Kellogg Masterphones end your search. Because circuit, condenser and coil are all interchangeable in any telephone . . . because a single base plate can be used for both desk and wall telephones . . . because all basic ringer parts are standardized . . . your inventory is reduced to the lowest possible.

—OR are you chiefly interested in satisfying varied service requirements with minimum adaptation?

It's a snap with new Kellogg Masterphones. To adapt the circuit to metallic or grounded ringing . . . to zone the induction coil for various loops . . . to change the condenser capacity in the circuit . . . all of these can be accomplished in a few minutes by simple adjustments of handy 2-way and 3-way switching units.

—OR, no doubt, you're concerned with increasing operating profits (and who isn't)?

That makes new Kellogg Masterphones your number one choice. Every design refinement . . . every engineering and construction detail . . . every one of its numerous and exclusive features . . . combine to make the new Kellogg Masterphone the wisest time, trouble and money saving investment you ever made.

Name it and.... *GET IT* in.....

Every quality you consider most desirable in a telephone, you'll find at its highest in the new Kellogg Masterphone. In this telephone, nothing was left undone to make it the most efficient, most economical, most dependable telephone ever offered.

Here, for example, is a telephone whose "nerve center"—the interconnecting Block—houses the entire circuit . . . provides the base for all essential terminations . . . makes it possible to simply plug or screw in components . . . makes installation, adjustment and servicing a matter of minutes.

And here is the one telephone that can be used for all types of subscriber service . . . that uses the same base plate for both desk and wall models . . . that offers such remarkable innovations as "universal" design and interchangeability of parts: a permanently wired circuit, fully protected against bugs, dust and moisture: new flexible ringer that "floats" to prevent distortion, improve tone quality and keep the ringer in permanent adjustment.

Here, in short, is the telephone that is functionally *right* from the bottom up—designed and engineered to give you the greatest telephone value ever made available. Order new Kelloggs Masterphones from your Kellogg representative *today*, then watch your operating profits go up as your costs go down.

KELLOGG SWITCHBOARD AND SUPPLY CO., 6650 SOUTH CICERO AVENUE, CHICAGO 38, ILLINOIS

KELLOGG WHERE ENGINEERING AND RESEARCH BUILT *Finer Communication Equipment*

IN THE NATION'S CAPITAL

BY
FRANCIS X. WELCH
WASHINGTON
EDITOR

Exodus of New Dealers from Washington stirs up "disaster" talk which recalls same dire prophecies when Democrats took over. . . . Mr. Welch makes predictions concerning legislation affecting telephone industry.

WASHINGTON right now is experiencing an exodus which almost might be compared with that of the Biblical Jews from the land of Egypt. The tried and true New Dealers, or what are left of them, are dropping off in the face of a discouraging return of the GOP to power—even though that power is confined to the legislative branch of the government.

Daily editions of the Washington (D. C.) *Evening Star* contain significant little items, tucked away in the classified "ad" section, such as:

Georgetown house for sale; New Dealers who have had enough want to leave Washington as quickly and quietly as possible. Make us an offer. Box 146-M.

Naturally these changes stir up certain apprehensions of fear or, at least, misgivings in the breasts of those who have not lived through a major shift of political control during their adult lives in the nation's capital. It's hard for the old timers to realize, but literally hundreds of thousands of people of voting age now working for the federal government never have had any other choice on the presidential ballot than the late President Roosevelt and his futile opposition. It is, naturally, something of a shock for these folks to realize that the old order changeth—now and then, anyhow.

What does it all mean? Quite understandably, there are those who still are trying, very industriously, to cultivate the idea that it all means disaster. The chairman of the Democratic party, Mr. Hannegan, who has lived comfortably through at least three major changes of federal political control and is as fat as he ever was, echoed that very thought in a pre-election speech. He predicted that Republican victory at the polls would be a "national disaster."

Hannegan is old enough to know better, of course. What he really meant was a disaster for a certain group of politicians, and as to that he probably was right.

But lest this "disaster" talk disturb some of the more naive of our citizens, let's take a glance back through the history books and see how often that old bugaboo has been exploited. It is safe to say that if American voters always had followed the counsels of the party in power at election time, John Adams' Federalist party still would be running the government.

It was the canny Thomas Jefferson who rightly sensed that mid-term elections would provide the safety valve whereby the American people could blow off steam when they felt incensed at the party in power instead of taking to the underground and starting a revolution as they have to do in some European countries.

"Short elections will keep Congress right," wrote Jefferson in 1820, echoing a similar sentiment he had voiced in 1807 that "a representative government, responsible at short periods of election . . . produce the greatest sum of happiness to mankind." Even earlier than that, 1804, in a letter to his secretary of the treasury, Albert Gallatin, Jefferson wrote: "I think the officers of the federal government are meddling too much in the public elections; will it be best to admonish them privately or by proclamation?" Jefferson at that time was President, himself.

For the biennial "disaster" prophecies, one only need consult the campaign speeches of almost any congressional election. Sooner or later, some champion of the "Ins" is bound to harp on that theme. Back in 1930, for example, while Hoover was in the White House and the Republican goose was hanging high, Maj. Gen. William J. Donovan, an able officer and lawyer with a fine record of public service before and since, solemnly warned a Republican rally in New York City that Democratic control of Congress would be a "national disaster." We all know that the good general survived to serve under that disastrous government with distinction.

Last month, during the campaign, Bob Hannegan gave the old "disaster" act a somewhat novel twist when he pictured the Democrats as the bulwark against Communism in this country. He said that only by entrusting power to the Republicans, who are "reckless drivers" into "chaos," could the nation "ever fall under the shadow of Communism." Needless to say, Bob hasn't canceled any of his insurance policies since the elections or made arrangements to move out of the country.

These references are made in this department only to forestall any criticism that this writer is whooping it up for "reaction," and so forth, when he reports the following blunt facts about certain legislation of interest to the telephone industry. Here they are:

(1) The Pepper Bill to increase minimum wages to 65 cents an hour is a dead duck.

(2) The Hill Bill to authorize REA to grant loans for rural telephone activities by co-operatives is a dead duck.

(3) Labor unions are going to get a Case Bill to cut them down to the same size as any other citizen and taxpayer.

(4) The Federal Communications Commission stands a good chance of getting a thorough investigation and raking over the coals by Congress.

(5) The public ownership boys in Congress have been decimated, and, as a result, all public utility industries can afford to breathe a little easier.

These five items are set down as relatively disinterested predictions. They are not set down in the spirit of approbation, exultation, or anything else. Just the same, readers of this depart-

ment are bound to say: "There's Welch gloating at last, after all these years." But before condemning the man as an Apostle of Reaction, just consider a few items more. They are presented herewith briefly and without color:

(1) The first old age pension law was enacted in 1923 during the Harding Administration. Before the New Deal came to power in 1932, there were 17 states having similar laws.

(2) By 1929 all states in the Union had enacted workmen's compensations except four Democratic strongholds of the solid south — Florida (home of Senator Pepper), Mississippi, South Carolina and Arkansas.

(3) If we say that in the year 1914 real wages in manufacturing industry were 100, then in the year 1920, at the end of the Woodrow Wilson epoch, wages were 120 points. In 1922, under President Harding, wages were 125. In 1924, under Coolidge, wages were 130. In 1929, at the end of the Coolidge era, wages were 136.

(4) Between the years 1910 and 1930, which embraces the span of the great period of "reaction" our radical friends sneer at, the number of child workers (under 16) dropped two million while the adult working population increased 50 per cent.

(5) During the "decade of reaction" after 1920, the number of our young people in high schools and colleges doubled and the nation's expenditures for education in public schools increased from $10 per capita (of population) in 1920 to $19 in 1930. Teachers' annual pay average rose from $870 to $1,420 and it isn't very much better today after all these years of enlightened liberalism.

So, all told, it isn't time yet to sit down and give up in tears of despair, as some of our friends suggest, about the "dark ages" into which our dear country seems destined to plunge as a result of the elections earlier this month. Even now, we pick up magazines, such as *The Nation* or *The New Republic* (edited by that great idealist and the nation's most unsuccessful electioneer, Henry Wallace), and see sad pictures of America now launched on another wave of "reaction" just like the one "after 1920." We are told that the nation's "hard won gains for liberalism and labor" will be snatched from us.

The answer is that they won't. They never have. But what is more likely to happen is that the basic productivity of the nation now may be given a long-deferred opportunity to catch up with these "gains for liberalism and labor." Furthermore, the demands of so-called "liberalism and labor" temporarily will be restrained from such wild excess as to threaten the killing of the goose that lays the golden eggs—to wit, the good old American system of free private enterprise.

Now to go back and explain briefly the basis for the five predictions about legislation made earlier in this article:

The Pepper Bill will probably be reintroduced. But organized pro-labor steam, behind this bill, was largely evaporated in the last election. There may or may not be hearings, but the only way it will ever even get to a vote is by modification much below the 65 to 75 cent minimum discussed during the last session.

The Hill Bill just naturally has shrivelled up in the blast of the economy gale now lashing Washington. All federal lending and spending agencies are caught between the GOP determination to balance the budget (while cutting taxes) and a certain irreducible minimum of necessary federal expenditures, such as interest on debt, armed forces, et cetera. REA folks figure they will be lucky to get 50 million for more loans for rural electrification next year. It follows that expansion into the telephone field is just out of the question.

The Case Bill or something like it will be one of the first things on the agenda of the 80th Congress. President Truman may feel constrained by party obligations to veto it. But the GOP plus the Southern Democrats of the Byrd-Tydings school of thought have the votes to override. Look also for a strong anti-public utility strike provision just like the USITA asked for in its recent convention in Chicago.

The FCC is on the spot. Too bad too. The commission really has improved a lot since the hectic days of former Chairman Fly. But the GOP elephant never forgets. It remembers bitterly the way the late President Roosevelt used his "security" powers to block and hamstring the abortive Cox investigation of the FCC in 1944. The Republican FCC critics on that Cox committee were Representatives Wigglesworth of Massachusetts and Wolverton of New Jersey, both in strong opposition to give the FCC a good going over. And so, despite the splendid efforts of Acting Chairman Denny to put the FCC back on an even keel, don't be surprised if Congress should break loose with another special investigation of the FCC. Incidentally, OPA Chief Paul Porter may not go back to the FCC chairmanship after all. There's a chance of confirmation troubles. He may prefer Bob Hannegan's job as head of the Democrats.

Public ownership sentiment in Congress best can be gauged by the votes of the so-called "public power bloc" led in the House by Representative Rankin of Mississippi and in the Senate by Senator Murray of Montana. The ranks of this group suffered heavy casualties in the recent election. The House defeats were as follows: Biemiller, Bobrowicz, Bradley, Coffee, DeLacy, Douglas (Ill.), Doyle, Geelan, Hook, Koppleman, LaFollette (Ind.), Mankin, Outland, Neely, Patrick, Patterson, Robinson, Savage, Toolan, Traynor, Voorhis. About 32 of this category survived in the House.

In the Senate the "public power bloc" with a full strength of 18 suffered seven election casualties: Guffey, LaFollette, Mead, Mitchell, Murdock, Tunnell, Wheeler. Of course, the "bloc" probably has picked up some new recruits in the recent election (this writer knows of two Republicans in the House). But as to that, we will just have to wait and see how they vote.

Person-to-Person

AN UNSUNG HEROINE

AN ELDERLY Chicago widow, living alone, might have died alone October 26, had it not been for an alert telephone operator's prompt action.

The operator, who prefers to remain anonymous, was on duty at the switchboard in an apartment hotel at 6510½ N. Ashland Ave., Chicago, when the light indicating the apartment of Mrs. Charlotte Richter, 75, flashed on.

The operator responded but there was no reply at the other end. She summoned police who found the elderly occupant unconscious beside her telephone. Firemen worked more than two hours before reviving the victim sufficiently to permit her removal to the hospital. There, it was disclosed that she had suffered a cerebral hemorrhage. Physicians said she probably would have died if the operator had not acted at once.

We hope the nameless operator sees these lines. In the golden chain of selfless service to humanity, forged by the telephone industry in its 70 years of existence, another link has been added.

This is Hawaii Calling

FROM a moving car in the Pacific to a moving car on the Mainland the conversation was as clear as calling the corner grocer. That was the opinion of participating callers in Honolulu as well as in St. Louis when the Mutual Telephone Co. of Hawaii made successful mobile telephone communication to St. Louis in mid-October. The call was a combined experiment for mobile telephone technicians and a demonstration for members of the Honolulu press.

It was a breezy early afternoon in Hawaii when the Green Hornet, as the sleek eight-passenger telephone-equipped car is called, was connected with Charles Valier, cruising around St. Louis. The voice of Mr. Valier, engineer for the Southwestern Bell Telephone Co., sounded clear and distinct, and for the next 20 minutes all occupants of the Green Hornet took their turn in talking to him. "It's a hot, muggy night here," offered Mr. Valier, and from there the conversation went to baseball, descriptions of passing scenes and shop talk.

"How's your municipal opera program this year?" queried Harry Lambeth, reporter for the Honolulu *Star-Bulletin*. The reply was that at the moment Mr. Valier was just driving by the Municipal Opera House. Roger Pierce, Mutual's radio engineer in charge of operations, furnished the St. Louis car with a graphic and lyrical description of the white-laced mountains in back of Honolulu.

Mr. Valier in turn asked how the Aloha Tower was doing, and reminisced briefly about a visit he had paid Hawaii 14 years ago. The experimental call terminated with alohas. Then for the benefit of the "gentlemen of the press" inter-island calls were made, as well as calls to their respective city desks, homes and the Honolulu chief of police.

Both city editors voiced the opinion, from their desks to the car, that the paper should employ mobile telephony, as soon as it became available, for the purpose of keeping tabs on their wandering photographers. It was while the Green Hornet was cruising by the yacht basin that both reporters beat the deadline by calling in an unexpected story about a boat being swamped upon a reef. Thanks to radio telephony the story made both evening editions.

Mutual Telephone Co. began its mobile telephone tests in August, upon the arrival of necessary equipment. The latter had been secured on the mainland by W. I. Harrington, the company's manager of radio communications. Shortly after this, Mr. Pierce, who is from Chicago, arrived in Honolulu to join Mutual's radio-telephone engineering department. Prior to leaving the mainland Mr. Pierce made the first transpacific call from a moving vehicle when he conversed, while cruising about St. Louis, to Mutual's officials in their Honolulu main office. (TELEPHONY, August 3, page 41).

A central station has been erected on the roof of Mutual's six-story exchange in downtown Honolulu. Here is housed the frequency modulated transmitter and the receiver on the high frequency band. Two cars similarly are equipped and have a selector unit. By means of the latter, the central station operator dials by radio the number of the car with which communication is desired. Link radio equipment is used.

Field surveys have been conducted over the highways and bi-ways of the entire island of Oahu in addition to the streets of downtown Honolulu and the deep valleys of the suburban section. Difficulties encountered in the valleys were breeched by using one of the cars as a sub-station. Eventually, permanent sub-stations will be erected at locations found most in need of a relay. Oahu's two long mountain ranges pose an obstacle at the moment for cross-island communications, but many satisfactory calls have been completed across the extensive plains that are filled with pineapple and sugar cane.

Potential users of mobile telephony in Hawaii are much the same as on the Mainland. Already taxi companies, dispatchers, doctors and trucking firms are waiting for the day when experiments are completed, the Federal Communications Commission license granted and equipment is available. Public utilities, furnished with demonstrations of mobile telephone as applied signified their intentions to secure this last word in communications. Of a purely local nature, sugar and pineapple plantations look for mobile telephone to connect their refineries and offices with their trucks and workers scattered over hundreds of fertile acres. And since mobile telephone can be linked to coastal harbor telephone service, fisheries have pricked their ears and asked, "When can we get our unit installed?" It's only a guess at the moment, said Mr. Harrington, but it will be at least from four to six months before Mutual will be ready to offer mobile service commercially.

Tests and surveys still are to be conducted to determine positions most suitable for stations that will furnish mobile communication not only for Honolulu, but for Oahu and the other five islands in Mutual's inter-island network. Meanwhile tests successfully have proved that the mobile telephone user can call not only any telephone in the territory, but can talk with ease to ships at sea, to pleasure and commercial craft in Hawaiian waters and to a moving car in St. Louis. Tomorrow it might well be a car in Shanghai or a plane in London.

Engineering Library

CONDUIT SYSTEMS | ENGINEERING

*By DANIEL SEITZ
Cable Superintendent
York (Pa.) Telephone and
Telegraph Co.

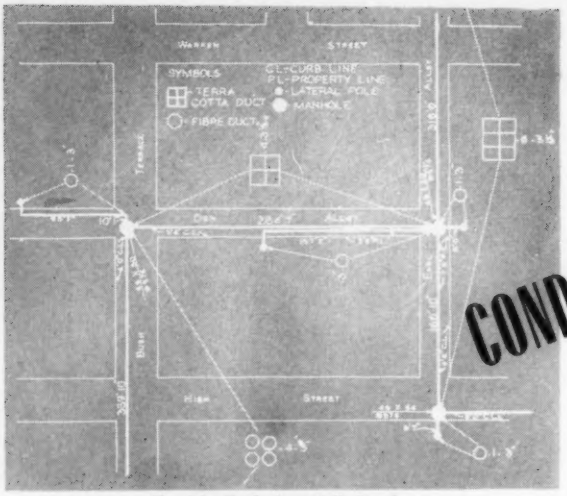


Fig. 14. Typical conduit drawing.

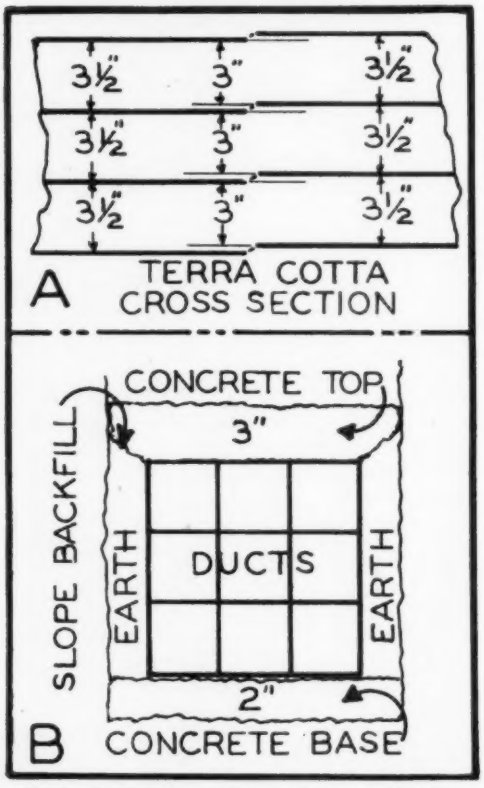


Fig. 1. Cross-sections of terra cotta duct installation.

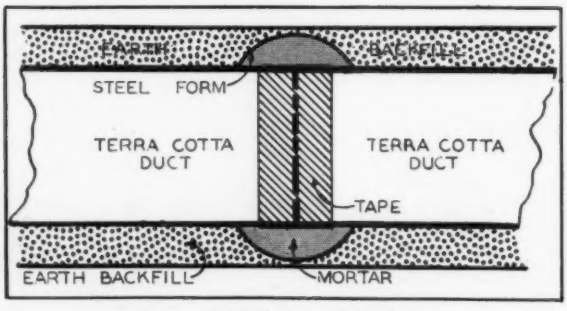


Fig. 2. Vitrified clay conduit joint.

WHEN necessary information with regard to the accurate location of water, gas and other underground structures is available, workable construction plans may be made that will ensure the successful completion of an underground telephone conduit installation. Municipal or highway engineers will cooperate when planning their new paving programs so that conduit may be placed prior to paving operations. This action will eliminate future disruption of the road surface. Therefore, an over-all plan showing the ultimate conduit locations should be prepared so that when any new highway paving is proposed, the ducts may be laid ahead of the paving operations. This is not only economical, but it also makes a better job possible.

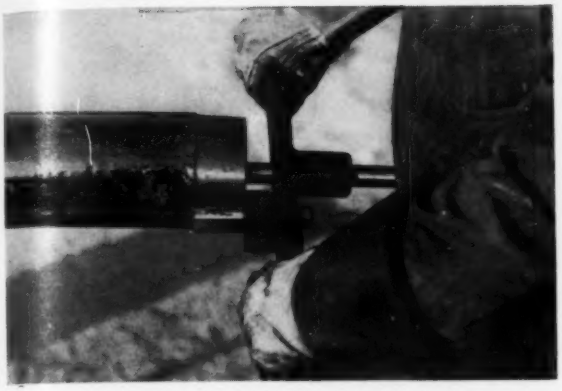
The choice of duct material should be governed largely by local conditions. Approximately the same size trench will be required for any given number of duct multiples whether they be clay or fibre encased in a concrete envelope. If vitrified clay is to be used, due care should be exercised in handling, transporting and storing it. When piling out on the job, these should be stacked with layers placed in opposite directions to prevent easy upsetting. Careless handling and storing often result in expensive breakage.

When a concrete base is used, it should be graded smoothly toward the manholes. This precaution prevents pockets in the conduit where water, mud or silt may collect, making it difficult to rod the ducts and pull in the cable. There usually is a good chance to dispose of this water if it drained to the manholes.

Electrolysis conditions usually are less severe on sheath in dry ducts than when water pockets exist. It is worthwhile, there, to drain the ducts, wherever possible.

Alignment of the ducts horizontally and lineally is important. Sharp kinks, due to misalignment, make rodding and pulling operations difficult and many times are the cause of serious sheath damage. Also, care should be exercised to keep the ducts clear of broken pieces and chips from the tile. *Fig. 1 (A)* shows the effect of misalignment at the joints.

In order to prevent tree roots and other foreign matter from entering the ducts at the joints, mortar bandages should be used for a seal. Another method employed is to wrap the joint with a strip of roofing paper, burlap or tape and cover with a cement and sand mortar.



Hand operated lathe for preparing fibre ducts.

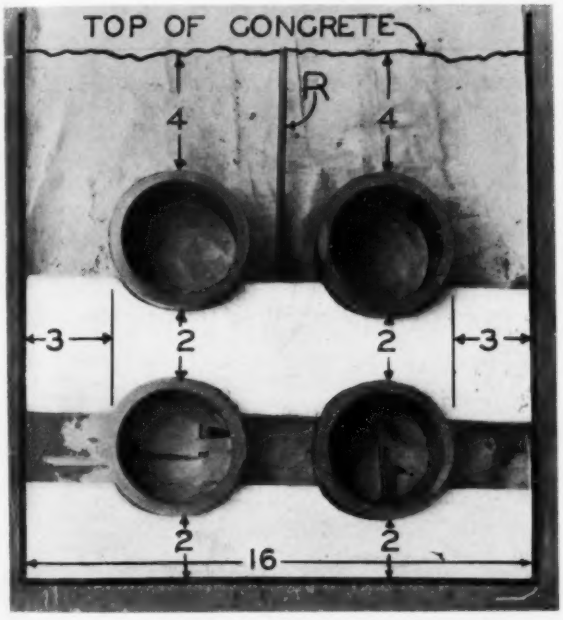


Fig. 3. Four-duct multiple installed with concrete spacers.

Fig. 4. Machine for machining fibre duct on the job.

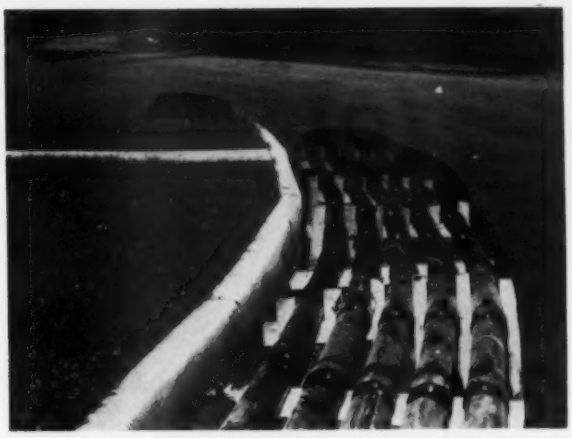


Fig. 5. Using short lengths for constructing radius.

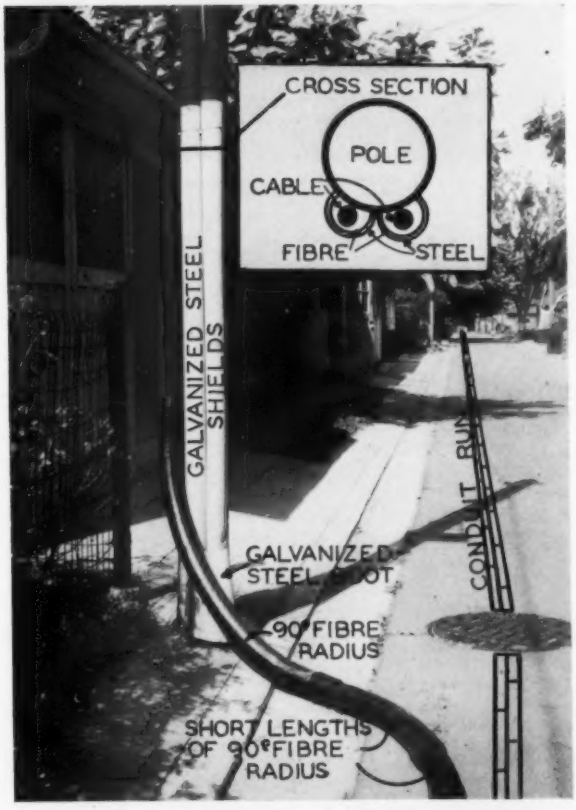


Fig. 6. Showing how laterals may be brought from the main trench to the pole.

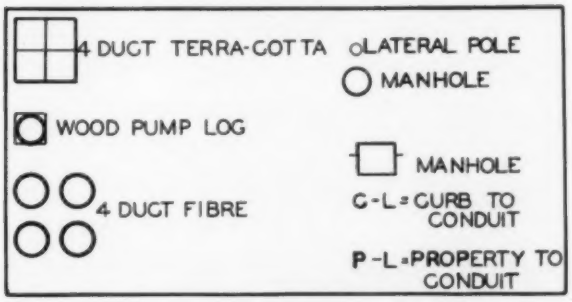


Fig. 13. Suggested symbols for conduit prints.

Fig. 7. Hoe type shovel digging trench.

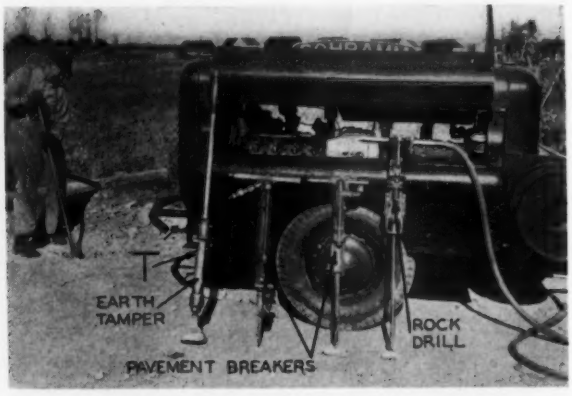


Fig. 8. Air compressor and tools for conduit construction.

Fig. 9. Small pneumatic tools for construction jobs.

Fig. 2 shows how inexpensive steel or galvanized iron forms may be placed and filled with mortar after first wrapping the joint with a suitable material to prevent the mortar from entering the duct. After the mortar sets, the forms are withdrawn and used repeatedly. If the protected cover is to be a creosoted wooden plank, the top of the joints may be covered with mortar by using a trowel to spread it evenly.

Fig. 1 (B) shows a nine-duct multiple with two-inch concrete base and three-inch protective concrete cover. There are several distinct advantages in this type construction, i.e., (1) the protection is much more effective; (2) it is economical; (3) it is quickly placed, and (4) it has longer life. When this method is followed, only the side of the joints are sealed with mortar because the concrete cover seals the top portion. Considerable concrete may be saved by sloping the backfill along the side of the ducts, as shown, especially where the ditch is unnecessarily wide. The concrete mix for the base and top may be one part cement, three parts sand, and five parts stone or, when greater strength is desired, a one-two-four mix best will meet the needs.

Lateral ducts from manholes to distribution poles and buildings should be placed on top of the clay and sufficient concrete cover installed to provide the necessary protection.

Often there are numerous advantages in the use of fibre or cement-asbestos conduit material. The following are some of the reasons for considering this type of construction:

(1) Long life. (Available records show that installations in service for more than 40 years are still in good condition.)

(2) Reasonable cost.

(3) Light weight.

(4) Convenient lengths.

(5) Driving fit joints—will not admit concrete or tree roots.

(6) Easy to cut into short lengths or split.

(7) Little breakage in transportation and handling.

(8) Any combination of duct multiples may be used.

(9) Any combination of duct sizes may be grouped in a multiple.

(10) Duct formations may be changed readily when obstructions are encountered.

Where there are no hazards because of excavations or traffic, one or two fibre ducts may be placed in a trench without the benefit of a concrete envelope. When more than two ducts are used, it is best to place them in concrete. Duct spacers are not an absolute necessity, but a better and more uniform job will result if these are used properly.

Fig. 3 shows a two-piece concrete spacer designed to provide a two-inch base, two inches between each duct and three inches on the sides, also a four-inch protective top.

The one-quarter inch rod *(Fig. 3 (R))* is used as a gauge to determine the depth of the concrete. When pouring the top, it extends four inches above the top ducts. A set of these spacers is placed at eight-foot intervals along the trench. After 100 feet or more of multiple duct have been set up in the trench, sand bags should be placed on top of it at eight-foot intervals to prevent floating and disarrangement of the ducts as the concrete pouring progresses. The sand bags should be removed just ahead of the pouring operation.

Fig. 10. Delivering ready mixed concrete directly into the trench.

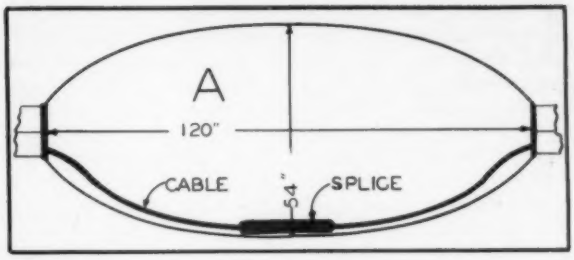


Fig. 11-A. Three-way manhole for a four-duct run.

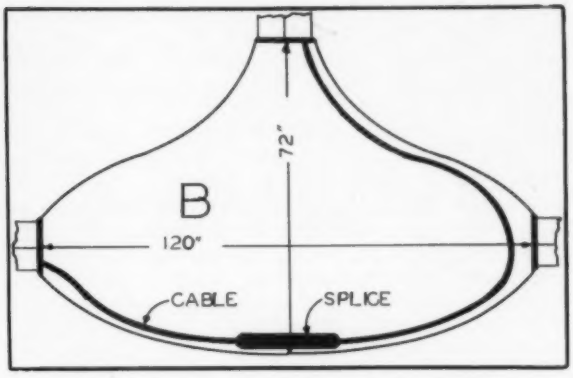


Fig. 11-B. Manhole shape and cable arrangement.

Fig. 4 indicates a very useful tool for preparing and fitting the duct in the field. This tool is adjustable and will accommodate sizes from two to six inches. It is especially useful when a radius similar to that shown in *Fig. 5* is to be constructed of short lengths of duct. All these lengths are 24 inches and will allow the use of standard 36-inch duct rods. The only other tools required are an ordinary coarse wood saw and hammer. Lateral ducts may be encased in the same concrete with the main ducts, but it is wise to place them on the top and the more important cables in the bottom where they are less likely to become damaged.

Fig. 6 shows how factory built 90-degree radius fibre bends are used to extend a lateral from the main trench to a pole or building. The illustration shows several lengths of pipe arranged above ground to indicate how a smooth bend can be made.

The two-duct lateral *(Fig. 6)* is made up by using two lengths of split duct and galvanized steel covers with a boot as shown in the cross section. These protective covers may be removed readily to inspect or repair the lateral cables. This also is a convenience when pulling in the cable. Wrought iron pipe for lateral risers is not recommended because it cannot be removed when repairs are necessary in the lateral cable and, unless the cable sheath is bonded to the pipe, electrolysis and lightning conditions are likely to cause cable failures.

Methods of trench excavation vary according to the type of road surface, underground structures encountered and the cost of labor. A gasoline or diesel powered light weight shovel, such as shown in *Fig. 7*, will excavate several hundred feet of trench to a depth of three or four feet in average terrain in an eight-hour day. This shovel bucket is built to cut a 16-in. wide trench which will accommodate a duct arrangement similar to that shown in *Fig. 3*. Where the paving is concrete or asphalt on concrete, an air compressor and associated tools must be used to break the paving. Hand labor and tools for break-

Fig. 12-A. Cable laid in one-half fibre duct.

Fig. 12-B. Cable with steel protective cover.

ing concrete paving are extremely expensive. After the hard surface top has been removed, a ladder type trench machine, or one of the type shown in *Fig. 7*, may be used. All underground structures such as water and gas pipes should be located either from drawings supplied by their owners or by methods described in TELEPHONY, January 5, page 14. These pipes should be located and uncovered by hand digging to prevent danger of damage.

Fig. 8 shows equipment required for breaking hard surface paving, drilling rocks, tamping backfill, etc. The air compressor will furnish sufficient pressure to operate several of these tools simultaneously. For instance, the rock drill and one or more pavement breakers may be operated at the same time. This equipment is intended primarily for conduit work, but the rock drill or pavement breakers are often useful in connection with pole hold digging when rock is encountered or to break pavement. The pneumatic hammer and tools shown in *Fig. 9* prove useful for drilling concrete or brick walls, breaking concrete around ducts during repair operations, etc. The hammer weighs only 17 pounds.

Wherever certified ready mixed concrete is available at a reasonable cost it will prove more economical than hand mixed concrete on the job. Unless careful control is exercised over the hand mixed type, it will not be uniform. A truck with rotary mixing while in transit is shown delivering concrete directly into the trench in *Fig. 10*. When the concrete is poured it should be allowed to set before backfilling. Then a six or eight-inch cushion of earth (no stones) cover should be placed before tamping in the balance of the backfill. *Fig. 8 (T)* shows a mechanical tamper which will do a far better job and in much less time than the hand tamping method.

The two most important requirements to be considered for manholes are size and shape. The size should be sufficient to accommodate not only the present number and size of cables, but consideration should be given to the future type and size of cable that may be installed. Working space also is an important factor. The shape should be such that sharp bends in the cable will be unnecessary and sufficient supports must be provided along the walls.

Fig. 11-A illustrates a straight through manhole of a shape and size suitable for a four-duct multiple. This arrangement makes it unnecessary to kink the cables during installation or when making subsequent repairs. If the walls are to be concrete, inserts should be attached to the forms on the outside at locations to fit cable racks. Inserts also should be placed in brick walls during construction. Note how the cable and splice in this type of manhole fits along wall without sharp bends or kinks. Further, working space is adequate.

Fig. 11-B shows a three-way manhole and indicates how the cable and splice should be reached. This plan will require more cable than taking a short cut from A to B, but this arrangement often proves useful when making changes and repairs. A similar design may be used for a four-way manhole. The splices with this type will be placed between two of the duct entrances in such a manner that the cables will go around at least one-half the manhole from where they enter to the exit.

A distinct advantage in building manholes of brick is that shapes and sizes may be changed at will. However, their costs are usually much higher than concrete. This is especially true when good collapsible forms are available and the earth is of such a nature that outer forms are not necessary.

Local conditions sometimes demand unusual installations. *Fig. 12-A* shows a conduit and cable job under a railroad viaduct. A piece of split fibre duct is supported by bolts anchored in the wall and carries a 25-pair cable. *Fig. 12-B* shows the same job with the metal cover attached. The cable through the viaduct is in fibre conduit supported by a steel strand. An anchor rod "A" with the end anchored in the rock, then protected at the bend by saddle "S," supports each end of the strand which is 200 ft. long with attachments to the roof of the viaduct at 40 ft. intervals.

When the job is completed, records and drawings should be made that will furnish all the pertinent data quickly. Using the same symbols for each item of the same type for all drawings makes available a uniform record easily recognized by all plant personnel.

Fig. 13 (page 17) suggests how the different items appearing on a conduit drawing may be indicated. The drawings should be drawn to scale except for streets and avenues which may be drawn wider so as to provide more room for data. One inch equaling 50 ft. is a convenient scale for manhole to manhole and laterals to poles and buildings.

Fig. 14 (page 16) indicates a small portion of a conduit drawing showing the detailed information that is most often required for plant records, etc.

Installation dates should appear on all drawings for mortality study and records. Recording the quantities of material shown by each drawing on a card and filing it according to the approved filing system for the drawings will provide a quick means of determining total trench or duct feet, manholes, etc. Also, this data will prove useful for any summary that may be required from time to time.

Finally, use a simple filing code so that plant personnel may locate any desired drawing quickly. This often is important during storms or accidents when certain information must be obtained without delay.

A SMILE

A SMILE creates happiness in the home, fosters good will in business—and is the countersign of friends.

It is rest to the weary, daylight to the discouraged, sunshine to the sad and Nature's best antidote for trouble.

Yet it cannot be bought, begged, borrowed or stolen, for it is something that is no earthly good to anybody until it is given away!

And if someone is too tired to give you a smile, just give him one of your's anyway. For nobody needs a smile as much as he who has none left to give.—**The Transmitter.**

SHERRON
ACOUSTIC
STEEL TELEPHONE
BOOTH

New booth beauty in

STAINLESS STEEL

Daylight - bright interiors! That's the order of the day. Gloom is taboo. In such locations, the new, gleaming Sherron Acoustic STAINLESS STEEL telephone booth is a must. It harmonizes with the sparkling interior scheme. It is highly light-reflecting. It is a shining example of Sherron originality in booths that attract patronage.

MORE REASONS WHY THE SHERRON ACOUSTIC STEEL TELEPHONE BOOTH IS TOPS:

- *All-metal rigid construction*
- *Occupies ⅛ less floor space*
- *Acoustic linings plus equal-leaf folding door retard outside noises.*
- *Improved door hinges prevent creaking or sticking. Door operates easily and quietly in stainless steel track*
- *Automatic, noiseless door switch controls ceiling light of special design, eliminating current consumption when not in use*
- *Linoleum covered steel floor prevents wear on floor of owner's premises*
- *Adjustable shelf and instrument backboard*
- *Electric ventilating unit of improved type*
- *Steel seat of new design*
- *High grade baked enamel finishes*

SHERRON METALLIC CORPORATION

1201 FLUSHING AVENUE • BROOKLYN 6 • NEW YORK

Still The "CH

You won't find many champions, in any field, who have held their places for twenty years and more. But here is one . . .

Today's Automatic Electric dial won its crown in 1925, and from that day to this has held its place as *the finest dial ever made.*

There's a champion's skill in every feature of this dial's design. Its fly-ball-type governor, worm-driven through a special laminated pinion, gives accurate speed control with a minimum of wear. Its extra-long main bearing, its positive pawl-lock, its finger plate (flanged to provide extra strength with less weight)—each of these features has proved itself through years of use on millions of telephones. And of course there's the patented "quieted" pawl, world-famous for its virtually silent operation. These are the features which have made this dial the "champ."

The championship stamina of the Automatic Electric dial keeps costly maintenance calls to a minimum—saves you real out-of-pocket expense. Pick the Automatic Electric dial, and you've picked the winner!

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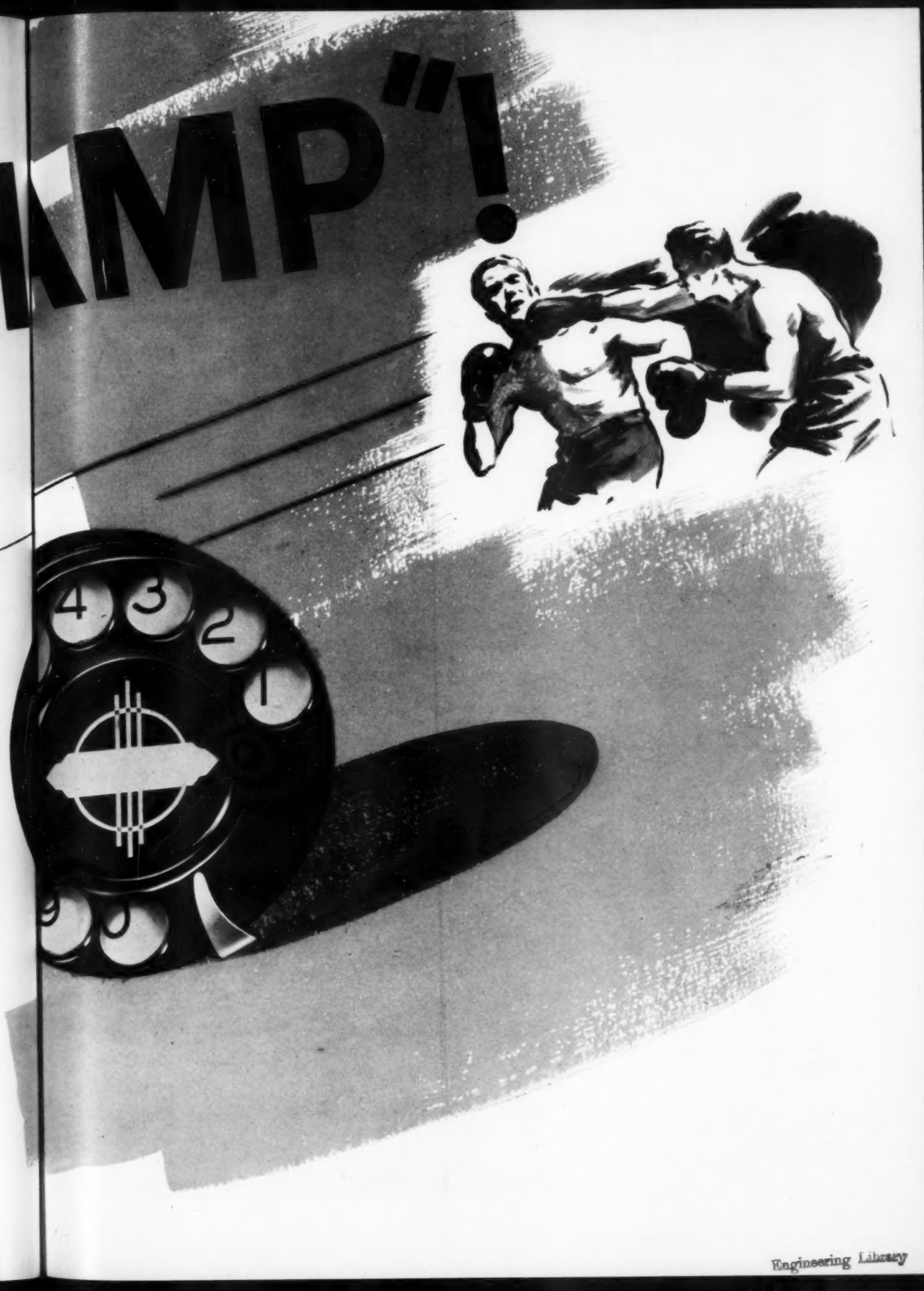


Engineering Library

THE PLANT MAN'S NOTE BOOK

BY
RAY BLAIN
TECHNICAL
EDITOR

THERE is a definite need for a small, self-supporting cable for use in lieu of drop wire on certain types of installations. This probably should be in five and 10-pair sizes. Since it need not be lead covered, perhaps the new plastics could be both for conductor insulation and an outer jacket.

It is believed this type of cable could be used to advantage to serve several telephones when located in a single building. Five or more separate drop wires extending from a terminal pole to a building are both unsightly and expensive. Neither is a slack span of lead covered cable attached to a building a thing of beauty or utility. The type cable suggested is believed to be the answer.

• • •

Telephone men can tell many interesting stories of unusual cases they have experienced in locating and clearing trouble. As an example, we recently heard of a case where a certain telephone subscriber, on a new dial system, complained that he frequently got wrong numbers. When he called the wire chief or chief operator, no trouble was experienced. Exhaustive tests failed to detect the trouble. Finally, this set was replaced by a new telephone which eliminated the subscriber's difficulties.

Then the wire chief determined to find the trouble. He checked the defective instrument in detail and found that the induction coil was not connected properly. When one digit, or the usual number of low digits, was dialed, trouble was not experienced. However, when two long digits, such as "8" and "9" were dialed, the impulses were snarled up and wrong numbers were the result.

Please write us about your most unusual case of trouble.

• • •

The power wire take-up reel pictured in the accompanying illustration was constructed by "Doc" Miller of Keller, Tex., from odds and ends at a total cost of $13.65. The 30-year old Fairbanks Morse engine was purchased for $5.00 and the remainder of the cost represented labor and material.

The reel is the 23-in. wheel of an old auto mounted on its spindle. The rim is used to belt the reel to the engine. The old rim bolts were removed and six pieces of three-eighth-inch ground rod, 13 ins. long, threaded for three inches on one end, was mounted in these holes around the rim. Two nuts, one on each side of the wheel, hold these pieces in place. A right angle turn was made in each of these irons about six inches from the rim. This forms the reel and to remove a coil of wire, the bent lengths of ground rod simply are given a half turn and the coil of wire slips off.

The stick in the operator's hand has a small piece of brake lining bolted to it and, when pushed against the rim, it acts as a brake. It also will be noted from the picture that this same stick is attached to a second member which extends forward and connects to an idler pulley. When the brake is pulled away from the wheel, the idler rises and tightens the belt to drive the reel. With this arrangement, one simple control lever either slows or speeds up the reel.

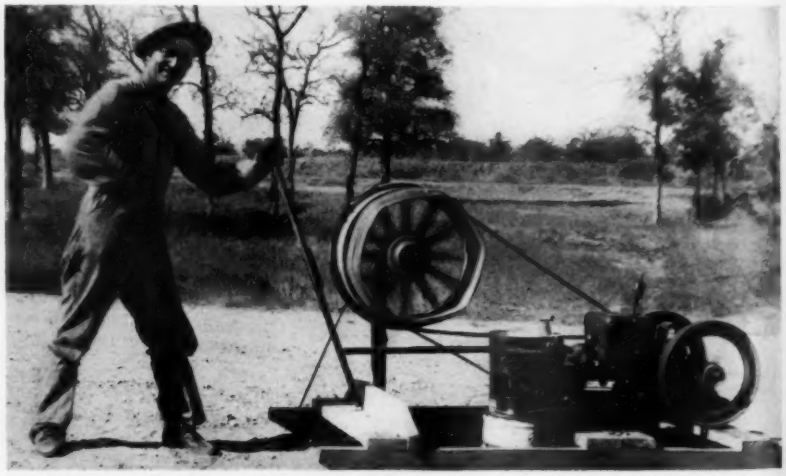
"Doc" states that this power reel easily can recover 100 pounds of iron wire in 12 minutes. With a little extra speed, this job can be completed in 10 minutes. The wire is under control at all times and the completed coils have the appearance of having just come from the factory.

• • •

Considerable interest has been voiced by telephone operating people recently as to the method used by selective calling stations for mobile telephone service.

This is accomplished by one system by the use of special calling units which permits the selective calling of stations, properly equipped, by frequencies sent out in a coded sequence from a central radio transmitter.

This particular selective calling unit consists of two principal parts, the resonant relays in a group of four and their associated coupling transformers. These relays are of a vibrating reed type, adjusted at the factory to respond to a selected band of frequencies and to reject all others. A signal at the resonant frequency energizes a particular reed and allows pulsating current to pass into the control circuit. This pulsating current is used to charge a capacitor or to operate a Thyraton. The parts for this control unit are assembled into a plug-in container approximately 2¼ ins. x 2¾ ins. with a removable cover.



By using four resonant relays per selective calling unit, a complete radio calling system can be designed which is capable of 10,000 selections of four-digit numbers, using only eleven frequencies in a range of 153 to 442 CPS, with 11.2 per cent separation between channels. If a smaller number of selections are required, fewer relays and channels may be used.

• • •

A new waterproofing and preserving compound recently made available can be used on stone, concrete, cement mortar, lime or cement stucco, tile, brick, plaster, wood, wallboard — in fact on any material which will absorb it. This new product is a clear transparent liquid, made up of certain compounds dissolved in a hydrocarbon base. The hydrocarbon carries these solids in solution into the stone and evaporates, leaving the voids of the stone filled with a hard mass, thus preventing the transmission of water and renders the surface resistant to moisture of all kinds.

This product has almost unlimited penetration. It is drawn into the voids by capillary attraction due to the affinity it has for stone.

This waterproofing liquid is applied just as it comes from the container. Application may be made by a spray, brush, or it may be floated on a floor and spread with a squeegee or mop. It is harmless to the hands. It should prove extremely useful in the waterproofing of floors and walls of basements in telephone exchange buildings. It also should prove useful for waterproofing cable vaults, manholes and other underground conduit structures.

Notebook Item Reprinted In "Reader's Digest"

The notebook item concerning the Los Angeles businessman who stopped his wife's charge accounts at half a dozen department stores as a quick means of locating her, which appeared on this page last summer, was picked up by *Reader's Digest* for reprinting in its November issue, page 122.

That Technical Editor Ray Blain's item was considered worthy of reproduction in the *Digest* for the reading pleasure of millions of persons around the globe, should come as no surprise to our readers who always find humor, valuable technical information and interesting commentaries on the mores and folkways that make up life in these United States.

PLANT MAN'S QUIZ

Q. Can the eye bolt method be used for attaching storm guys to poles?

A. When two guys are placed opposite each other, this method can be used. The bent thimble eye bolt is used to attach one guy, and a storm guy strap is placed under the eye bolt nut to attach the other guy.

• • •

Q. Is it considered good practice to attach two guys to a single anchor rod?

A. This is an approved practice when a twin eye rod is used. The anchor, however, should be of a type suitable for holding the combined strain placed on the two guys.

• • •

Q. Please describe an eight-party rural line arranged for harmonic ringing.

A. With this system, four bells are connected from the tip side of the line and four bells from the ring side to ground. These bells are run by four different frequencies of generator. The cord circuits on the switchboard must be arranged to select any of the four frequencies and connected either to the tip or the ring side of the line.

• • •

Q. What gas pressure should be applied to a cable for flash testing a splice?

A. As a rule, a pressure of from nine to 12 pounds per square inch at 70 degrees F. will prove satisfactory. In no case should a pressure of over 12 pounds be used and ordinarily five pounds will prove adequate.

• • •

Q. How should relay or key contacts be cleaned?

A. An approved burnisher should be used for this purpose. Carbon tetrachloride may be used to clean contacts, but they should be burnished immediately afterwards in order to remove a film which may form on the contacts and cause trouble.

• • •

Q. Is there any objection to the splicing of inside house wire when such action is necessary to move a telephone and avoid replacing all wiring?

A. In our opinion, good splices in house wire are justified under the conditions you mention. Compression type sleeves covered with an insulated plastic now are available for this purpose. These splicing sleeves do not require taping and make a neat splice.

• • •

Q. How should crossarms and poles face on an open wire line?

A. In general, crossarms on straight sections of line should face in opposite directions on adjacent poles. This arrangement ordinarily will provide adequate holding power in both directions. On curves, all crossarms should face the center of the curve. On single or double pole corners, the crossarms on the two adjacent poles should face the corner.

• • •

Q. We have a cross-connected terminal installed in a long aerial cable which is used for testing purposes. Is it considered necessary to bond the sheath of each cable at this point? If so, why?

A. The sheath of aerial cable should be continuous electrically for its entire length. This is necessary in order to prevent large differences of potential which otherwise would occur at sheath ends during electrical storms.

• • •

Q. What is the dimension of protector gaps used to protect telephone equipment and cable?

A. This is a controversial subject. However, the following often is used and is offered as a guide. To protect equipment, a gap of .003 to .004 in. with a breakdown of 350 to 500 volts peak, is used. Adequate protection usually is provided for cable with a gap of about .006 in. with a breakdown of about 700 volts peak.

• • •

Q. What type of tool should be used to dress up skinners on multiple jack cables?

A. A special tool which is essentially a metal comb generally is used for this purpose. If this tool is not available, a hook arrangement can be fabricated locally which will prove adequate in most cases.

THE OPERATOR'S CORNER

BY
MAYME WORKMAN
TRAFFIC
EDITOR

IN order to deal successfully each day with the perplexing problems of life, it is necessary that we realize and respect the relationship between a tranquil mind and physical fitness. Health is necessary to all the duties, as well as the pleasures, of life. According to an Arabian Proverb, "He who has health has hope; and he who has hope, has everything."

One of the problems which beset chief operators, particularly during the winter months, is absenteeism due to colds and other physical ailments.

M. H. Manson, medical director, American Telephone & Telegraph Co., states, "Keeping well requires periodic health examinations." The following "Question and Answer Discussion" by Mr. Manson gives his reasons for stating that periodic health examinations are necessary.

"Why should I have a periodic health examination if I am not sick?

"Because it helps uncover diseases in their early stages, even before you are aware of symptoms, and permits taking steps to prevent their developing into serious ailments. It often stops unnecessary worry and fear by revealing conditions to be non-existent or less serious than imagined. If you have a chronic condition, it helps you keep the situation in check and add years to your life.

"How often should I have a check-up?

"Generally speaking, it is desirable to have an examination annually. However, a safe guide is every three years for normal persons under 30, every two years for those between 30 and 40, every year between 40 and 60, and semi-annually for those over 60.

"Of what does a good health examination consist?

"THE ORIGINAL examination should cover a detailed history, physical examination, urinalysis, blood count and X-ray of the chest. Other special tests would depend on individual need at the time of the examination. A correct estimate of the person's health would suggest that the physician ask the individual how he feels, sleeps, what his food habits are, the nature of his work and home life, whether or not he exercises and what kind of recreation he takes and what his interests are in general.

"How can I make my check-up effective?

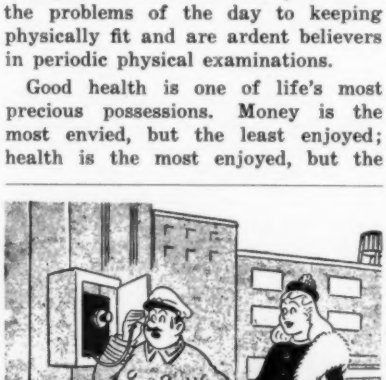
"You should jot down in advance the questions you would like to ask the doctor and health problems you want to discuss. Be prepared to mention any troublesome or persistent symptoms, even though you think them trivial.

"Why is a periodic examination important for middle-aged persons?

"Many ailments, such as heart disease, irregularities of the blood and kidneys, growths and tumors and other physical liabilities which are direct causes of serious and even fatal illnesses, begin to show up in middle age. A periodic examination, wise at all ages, should be a 'must' for persons in middle life."

The writer and many of her friends and acquaintances in the telephone industry attribute their ability to meet the problems of the day to keeping physically fit and are ardent believers in periodic physical examinations.

Good health is one of life's most precious possessions. Money is the most envied, but the least enjoyed; health is the most enjoyed, but the least envied. This superiority of the latter still is more obvious when we reflect that the poorest man would not part with health for money, but the richest gladly would part with all his money for health.



"Hurry with the wagon, Sarge—you know I'm putty in the hands of women!"

Questions from Illinois Operators

(1) Why do operators challenge with "Who are you?" on certain toll calls, usually when a switch is involved?

(2) Have you any suggestions on how to eliminate tardiness?

(3) What are the three most important qualities or abilities an operator should strive to cultivate?

(4) In what instance should you place a call on a busy line?

(5) How should an operator handle a call of an emergency nature?

Answers ot these traffic questions are presented on page 36.

V V

Telephoned Instructions Save Patient's Life

A volunteer fire chief of St. Louis, Mo., was credited November 12 with saving the life of a pneumonia patient left gasping for breath when the power for his oxygen tent was cut off by a strike of power company workers.

The volunteer, Robert Manley, aided by the telephoned instructions of Dr. Louis Feldman, rigged up a substitute apparatus which, the physician said, saved the life of Erwin J. Rasch.

When the power went off in Mr. Rasch's home it shut off the two motors operating his tent. His wife seized the telephone and called the volunteer fire department.

V V

United Names New Plant Manager at Warsaw

Fred Hosea, general plant manager of the United Telephone Co., Warsaw, Ind., resigned recently after serving in that capacity for 12 years. He has accepted a position in Florida.

Earl Daniel, district manager for the United company at Plymouth, Ind., for the past two years, succeeds Mr. Hosea, having taken over the plant duties at Warsaw on November 1.

COURTS and COMMISSIONS

Georgia Company Gets Higher Rates for Magneto Service

The Georgia Public Service Commission on November 6 approved the requested increased rates for unlimited magneto exchange service as stated in the petition filed by the Standard Telephone Co. for service within the Clarkesville and Cornelia, Ga., exchange areas with one exception: The rate for business, one-party service was set at $2.75 by the commission, rather than $3.00 as asked by the company. The requested and approved rates are as follows:

	Requested Rate Per Month	*Approved Rate Per Month*
Business, one-party.	$3.00	$2.75
Business, two-party.	2.25	2.25
Business, four-party	1.75	1.75
Residence, one-party	$2.25	$2.25
Residence, two-party	1.75	1.75
Residence, four-party	1.50	1.50
Business extension..	$1.00	$1.00
Residence extension.	.75	.75

Inasmuch as the Standard company also renders common battery exchange service, the commission specified that no change was authorized for that service. Upon the establishment of the approved rates which are to become effective on December 1, the commission stated that no extra charge is to be made for handset telephone instruments.

H. M. Stewart, proprietor of the Standard Telephone Co., filed his petition with the commission on July 24 at which time the hearing was set for August 28. Mr. Stewart appeared at the hearing in his own behalf and no one appeared in opposition to the petition.

It was revealed that the Cornelia and Clarkesville exchanges have shown considerable growth and that more than 150 subscribers have been added during the past year. Free service is rendered between these two exchanges which are about 10 miles apart. Mr. Stewart submitted plans which indicated that he is continuing to improve his facilities and the service being rendered by his company.

The over-all operations of the Standard Telephone Co., as set out in the annual report filed with the commission and as shown at the hearing, indicated that the company, as a whole, is being operated at a loss. Mr. Stewart stated that the loss was due to the fact that labor costs during the past year for plant and switchboard operation have increased from 20 to 30 per cent and that the cost of maintenance work had greatly increased during the same period.

A customer analysis made by the commission indicated that the proposed rates for exchange service would increase the company's revenue $2,235 per annum.

V V

Four Minnesota Companies Seek Rate Increases

Petitions of four Minnesota Independents for monthly rate increases are scheduled for hearing in early December before the Minnesota Railroad & Warehouse Commission.

To be heard December 9 is the application of the Vergas (Minn.) Telephone Co., Otter Tail County, which proposes to install dial service on approval of the following monthly gross rates:

Vergas (Minn.) Telephone Co.

Class of Service	*Present Gross Rates*	*Proposed Gross Rates*
Individual line, business (magneto) ...	$2.50	$3.75
Individual line, business, (common battery)	3.00	...
Individual line, residence, (magneto)	1.60	2.75
Individual line, residence (common battery)	2.10	...
Four-party, residence (magneto)	1.40	1.75
Rural, business	...	2.75
Rural, multi-party (grounded)	1.50	...
Rural, multi-party (metallic)	1.75	2.25
Rural switching	.46	.50
Extension, business..	...	1.00
Extension, residence.	...	.50

In addition to above rates, suspension of service will be made at the request of the subscriber at one-half of regular rate for any class of service.

Twin Valley-Ulen Telephone Co., Twin Valley (Hearing December 10)

Class of Service	*Present Gross Rates*	*Proposed Gross Rates*
Individual line, business	$2.25	$2.75
Individual line, residence	1.50	1.75
Rural stations, metallic	1.50	1.75
Rural stations, grounded	1.50	1.75
Rural stations, switching	.35	.50

Newfolden (Minn.) Central Telephone Co. (Hearing December 11)

Class of Service	*Present Gross Rates*	*Proposed Gross Rates*
Individual line, business	$2.25	$2.50
Individual line, residence	1.50	1.75
Rural multi-party, company-owned ...	1.25	1.50
Rural multi-party, switching charge ..	.35	.50

Warren (Minn.) Telephone Co. (Hearing December 11)

Class of Service	*Present Net Rates*	*Proposed Net Rates*
Individual line, business	$3.00	$3.50
Two-party line, business	2.50	3.00
Individual line, residence	1.75	2.25
Two-party line, residence	1.50	2.00
Rural stations owned, metallic	1.50	2.00
Rural stations owned, grounded	1.50	1.75
Service switching stations	5.00*	7.20*

*Per year.

V V

Oregon Telephone Official Hits Rate Reductions

Oregon telephone rate reductions are not justified by the earnings outlook in the immediate future, F. D. Tellwright, vice president and general manager for Pacific Telephone & Telegraph Co. in Oregon, said recently. (TELEPHONY, November 9, page 26.)

Mr. Tellwright's comment was in

answer to recent statements by George H. Flagg, Oregon public utilities commissioner, and City Commissioner Dorothy McCullough Lee concerning proposed reductions in intrastate telephone rates.

"In fact," Mr. Tellwright said, "the upward trend of current expenses, reflecting sharply increased pay roll costs, as well as higher prices for materials, may make it necessary to request rate increases.

"This is particularly true in view of our tremendous construction program in 1946 and 1947 to provide the facilities necessary to furnish service to all waiting applicants and to furnish Oregonians a better local and long distance service than ever before."

Mr. Tellwright asserted that the Oregon intrastate toll rate schedule is an integral part of the over-all Oregon rate schedule, designed to produce the revenue necessary to meet costs of furnishing local and long distance service within Oregon.

"A reduction in intrastate long distance rates would reflect at least offsetting increases in rates for local service," Mr. Tellwright said. "Our revenues must be adequate to maintain earnings sufficient to attract the enormous amounts of new capital needed to meet the record demands for telephone service."

V V

Southern Bell Asks Higher Rates in South Carolina

Because of greatly increased wages and rising costs of material and building construction, the Southern Bell Telephone & Telegraph Co. on November 6 asked authority to raise rates in South Carolina to meet the increased costs of providing service and to enable the company to improve and expand service in pace with the state's economic development.

In an application filed with the South Carolina Public Service Commission, the company said its expenses in South Carolina had climbed 154 per cent since 1940, while revenue increased only 108 per cent. During this same period, total payroll costs increased 285 per cent. The company said it had 2,500 employes providing service in South Carolina and that this represented an increase of 100 per cent since 1940.

The rate increase for local service would be on a sliding scale, depending on the size of the locality. The company also is asking authority to increase long distance rates five cents on most calls within the state.

The company stated that the requested rate increase would not produce all the added revenue that current costs indicate is needed but that it would afford temporary and immediate relief. Whether the requested rates will prove sufficient will be determined by what further increases in costs occur and by operating experience under the new rates.

The increases requested for residence local service were held to a minimum as it was felt to be in the interest of business in the state that residential rates be kept as low as possible. It further was stated that the total increase would be only about 9½ per cent of Southern Bell's total revenues in the state.

"The company is doing a larger volume of business than ever before," E. H. Wasson of Charlotte, Carolinas manager of Southern Bell said, "but our earnings have dropped to a dangerously low point. This has resulted from the fact that wages and other costs have gone steadily upward during recent years while rates for local telephone service have remained the same and long distance rates have been reduced."

Mr. Wasson pointed out that telephone wage rates alone for South Carolina had increased by $1,510,000 since March, 1945, on an annual basis, adding that the cost of erecting telephone buildings had jumped 75 to 100 per cent, the over-all cost of telephone facilities 45 to 60 per cent, and telephone materials 15 to 25 per cent.

"We are asking now for increases in rates that will more nearly reflect the costs of providing the service," Mr. Wasson said.

Mr. Wasson said the telephone company's investment in South Carolina is approximately $23,670,000, representing an increase of $7,400,000 in the last six years.

V V

O.K.'s City Tax on Telephones

The Sarasota (Fla.) City Council November 5 adopted a measure imposing a municipal tax on telephone, electricity and metered and bottled gas service. The local ordinance imposes a 10 per cent tax on the first $25 of the consumer's bill, 5 per cent on the second $25 and 1 per cent on each additional $50. Anticipated revenue of $50,000 a year from the measure will be used for street maintenance.

V V

To Operate Telephone System

The Illinois Commerce Commission on November 7 authorized the Shipman (Ill.) Telephone Co., a mutual concern, to operate a telephone system in Shipman, Macoupin County, serving the public generally.

Schedule Rate Hearing of Danube, Minn., Company

Hearing on the application of the Danube (Minn.) Telephone Co.'s request for authority to change its schedule of rates will be held December 6 at Danube. Present and proposed monthly gross rates follow:

Class of Service	*Present Gross Rates*	*Proposed Gross Rates*
Individual line, business	$2.25	$2.75
Two-party line, business	2.00	2.50
Four-party line, business	...	2.25
Extension stations, business	...	.75
Individual line, residence	1.75	2.00
Two-party line, residence	1.50	1.75
Four-party line, residence	...	1.50
Multi-party line, rural	1.50	1.75
Extension stations, residence	...	.50
Service station switching	...	.50

V V

Cornwall Telephone Co. To Issue Stock

The Cornwall Telephone Co., which renders telephone service in the town of Cornwall and in part of the town of New Windsor, Orange County, N. Y., recently was authorized by the New York Public Service Commission to issue 2,825 shares of common stock and $137,500 of unsecured debentures bearing interest at 3⅛ per cent per annum. The debentures are to be dated November 1, 1946, and are to mature May 1, 1970. They will be redeemable at the company's option prior to maturity at prices prescribed by the commission.

The common stock, which is to be of no par value, is to be sold at not less than $20 per share to Central Hudson Gas & Electric Corp. and the debentures are to be sold to Connecticut Mutual Life Insurance Co. The total amount to be raised in the financing is $194,000 and the major part of the proceeds, together with additional funds of the company, are to be applied for construction purposes calling for a program of improvements in the company's plant and system at an estimated cost of $210,000. Of the new funds to be raised $14,000 will be used to discharge $10,000 of the company's outstanding 4½ per cent debentures due in 1965 and $4,000 in payment of a note.

The commission's authorization is based upon findings by Hearing Examiner William T. Wilkinson, who conducted the proceeding. After making modifications in the company's petition,

Mr. Wilkinson concluded that the construction proposed by the company is necessary and will be accomplished at a reasonable cost considering present economic trends.

V V

Hearing on Rate Hike for 18 Exchanges Set for December 12

The Garden Valley Telephone Co., Erskine, recently filed application with the Minnesota Railroad & Warehouse Commission requesting increased rates at its 18 exchanges in Minnesota. Hearing has been set for December 12.

The present (A) and proposed (B) gross monthly rates are as follows, except the present local rates at St. Hilaire which are net:

B—1: Individual Line, Business
B—2: Two-party Line, Business
R—1: Individual Line, Residence
R—2: Two-party Line, Residence
R—4: Four-party Line, Residence

	B—1		B—2		R—1		R—2		R—4	
	A	B	A	B	A	B	A	B	A	B
Bagley	$2.75	$3.25	$2.50	$3.00	$2.25	$2.50	$2.00	$2.25	$1.75	$2.00
Beltrami ..	2.25	2.75	2.00	2.50	1.75	2.00	1.50	1.75	1.25	1.50
Clearbrook .	2.25	3.00	2.00	2.75	1.75	2.25	1.50	2.00	1.25	1.75
Erskine ...	2.25	3.00	2.00	2.75	1.75	2.25	1.50	2.00	1.25	1.75
Fertile	2.50	3.00	2.25	2.75	2.00	2.25	1.75	2.00	1.50	1.75
Fosston ...	2.75	3.25	2.50	3.00	2.25	2.50	2.00	2.25	1.75	2.00
Convick ...	2.25	2.75	2.00	2.50	1.75	2.00	1.50	1.75	1.25	1.50
Goodridge .	2.25	2.75	2.00	2.50	1.75	2.00	1.50	1.75	1.25	1.50
Grygla	2.25	2.75	2.00	2.50	1.75	2.00	1.50	1.75	1.25	1.50
Gully	2.25	2.75	2.00	2.50	1.75	2.00	1.50	1.75	1.25	1.50
Leonard ...	2.25	2.75	2.00	2.50	1.75	2.00	1.50	1.75	1.25	1.50
McIntosh ..	2.25	3.00	2.00	2.75	1.75	2.25	1.50	2.00	1.25	1.75
Mentor	2.25	2.75	2.00	2.50	1.75	2.00	1.50	1.75	1.25	1.50
Oklee	2.25	3.00	2.00	2.75	1.75	2.25	1.50	2.00	1.25	1.75
Plummer ..	2.25	2.75	2.00	2.50	1.75	2.00	1.50	1.75	1.25	1.50
Red L. Falls	2.75	3.25	2.50	3.00	1.75	2.50	1.50	2.25	...	2.00
St. Hilaire.	2.00	2.75	1.75	2.50	1.25	2.00	1.00	1.75	...	1.50
Winger ...	2.25	2.75	2.00	2.50	1.75	2.00	1.50	1.75	1.25	1.50

Rural Multi-Party Service	A	B
Metallic, all exchanges	$1.75	$2.25
Grounded, Red Lake Falls	1.50	1.75
Grounded, all other exchanges	1.25	1.75
PBX Trunks—Red Lake Falls	$2.75	$3.25
Extension Stations—Net Rates		
Business, Red Lake Falls	$1.00	$1.00
Residence, Red Lake Falls	.75	.75
Business and Residence, all other exchanges	.35	.60
Service Station Switching—Net Rates		
Red Lake Falls	$ .35	$ .60
Bagley, Goodridge and Grygla	.40	.60
All other exchanges	..	.60

In addition to the above rates, suspension of service at the request of the subscriber at one-half of regular rate for any class of service. The present monthly gross rates are subject to a twenty-five cent discount for prompt payment.

Under proposed rates: Local rates to be billed monthly in advance with a discount of 25 cents per month to be allowed if paid on or before the 15 day of the month in which service is rendered. Rural rates to be billed quarterly in advance with a discount of 75 cents if paid on or before 15 day of the first month of the quarter, 50 cents if paid on or before the 15 day of the second month of the quarter, and 25 cents if paid on or before the 15 day of the third month of the quarter for which service is billed.

Bell Employe Buys Independent Company

Harry A. Fiske, Jr., veteran New York (N. Y.) Telephone Co. employe, said November 11 that he had purchased the Dundee Telephone & Telegraph Co. which serves 800 subscribers in the Seneca and Keuka Lakes District.

He said he bought the company from Dr. A. J. Price of Canandaigua, who is retiring from business.

Upstate Corporation Announces New Building Program

The Upstate Telephone Corp., Johnstown, N. Y., on November 12 announced the purchase of three pieces of property—the first step in a program to relieve congested telephone facilities providing service to Johnstown, Gloversville and nearby communities, and to furnish these cities with the most up-to-date telephone service.

While no figures were given as to the cost of the project, completion of the program, it was explained, will require a very large expenditure, the carrying out of which is dependent upon approval by the New York Public Service Commission of necessary financing to obtain the funds required, and an adjustment in exchange rates, said to be considerably lower than any comparable size community (Johnstown and Gloversville) in New York State.

Among the improvements planned are the: Installation of latest type of central office equipment with toll center remaining in Johnstown; new building to provide office space for general office personnel and storage for material and automotive equipment; alterations and changes in present Gloversville building to likewise house new central office equipment which will be cut into service simultaneously with new toll and local switchboard equipment in Johnstown; new inter-city cable between Johnstown and Gloversville; a new toll position in Johnstown, and three additional switchboard positions for installation in Gloversville.

It was pointed out that several years will be required for completion of this program because of the immense amount of work involved and the difficulties in obtaining material and equipment.

V V

To Evaluate Chillicothe, Ohio, Firm Seeking Rate Increase

According to a letter read before city council November 11, the Ohio Public Utilities Commission plans to make an appraisal of the properties of the Chillicothe (Ohio) Telephone Co. and to investigate its revenues and expenses before reaching a decision on the company's request for rate increases at its Chillicothe and Bourneville exchanges.

The letter, written by H. L. Mason, commission chairman, and signed by Harry M. Miller and Paul E. Weiland, members, stated that a further hearing would follow the evaluation and investigation.

Paul E. Reed, assistant chief engineer of the commission, and his assistants, will make the investigation into the value of the properties as of July 1, 1946. Meanwhile, the chief accountant of the commission and his assistants will investigate revenues and expenses for the year ending June 30, 1946. The accountants also will endeavor to determine anticipated revenues and expenses for the near future, under both the present and the proposed rates.

V V

Change Commission Name

California voters approved at the recent election a state constitutional amendment changing the name of the California Railroad Commission to the California Public Utilities Commission. Its powers, duties and functions remain the same, but hereafter commis-

sioners appointed by the governor will have to be approved by the state senate (TELEPHONY, October 5, page 34).

V V

Summary of Commission Rulings and Hearings

Arizona Corporation Commission

January 16, 1947: Hearing concerning service improvements made by Navajo-Apache Telephone System, Inc., Holbrook, as directed by the commission.

California Railroad Commission

November 1: Hearing on application of California Water & Telephone Co., Monrovia, for permission to establish exchange at Idyllwild.

Illinois Commerce Commission

November 18: Hearing on complaints of Edwin R. Hackett and Commercial Telephone Workers' Union against Illinois Bell Telephone Co. as to discontinuance of coin box service by respondent in Chicago.

November 19: Hearing on complaint of J. W. Spence against Illinois Commercial Telephone Co. relative to telephone service at Fairfield and Geff. Continued from October 22.

November 19 and 21: Hearings on application of Illinois Commercial Telephone Co., Springfield, for increased rates and revision in rules and regulations applying to all exchanges served by said company. Continued from October 24.

November 19 and 21: Hearings on complaints of cities of Carbondale, Eldorado, Anna, Murphysboro, West Frankfort, Herrin and Pinckneyville against Illinois Commercial Telephone Co. as to inadequate, insufficient and unsatisfactory telephone service. Continued from October 24.

November 21: Hearing on complaint of Mid-Line Telephone Co. against Harmon Telephone Co. and Illinois Bell Telephone Co. as to inability to secure toll free connection with respondent companies to and from Sterling.

Kansas Corporation Commission

December 2: Hearing on application of Logan (Kan.) Telephone Co. for authority to make certain rate changes.

December 2: Hearing on application of Farmers Mutual Telephone Co., Wakefield, for authority to make certain rate changes at Broughton and Oak Hill.

December 2: Hearing on application of Courtland (Kan.) Telephone Co. for authority to make certain rate changes.

December 2: Hearing on application of Belpre (Kan.) Telephone Co. for authority to make certain rate changes at Belpre and Trousdale.

December 2: Hearing on application of D. M. and Josephine M. Brasier, doing business as Americus (Kan.) Telephone Co., for authority to make certain changes in rates.

December 9: Hearing on application of Atchison County Mutual Telephone Co. for authority to make certain rate changes at Muscotah.

December 9: Hearing on application of Western Light & Telephone Co., Inc., for certificate of convenience and authority to transact business in Kansas within corporate limits of Waldo.

December 9: Hearing on application of Auburn-Vidette Telephone Co., Auburn, for permission to cease operating free service line between Auburn and Wakarusa.

December 9: Hearing on application of Home Telephone Co., Randolph, for authority to make certain rate changes.

New York Public Service Commission

November 18: Proceeding as to service and equipment of Upstate Telephone Corp, Johnstown, and New York (N. Y.) Telephone Co. provided in furnishing toll service to territory served by Upstate Telephone Corp.

Oklahoma Corporation Commission

January 29: Hearing on application of citizens of Stroud for order requiring Oklahoma Telephone Co. to render adequate service there. Continued from November 6.

January 29: Hearing on application of Ed Jackson et al for adequate service on rural line of Southwestern States Telephone Co. out of Purcell. Continued from November 6.

February 12: Hearing on application of Oklahoma Automatic Telephone Co. for more time to complete construction to restore telephone service out of Clarita. Continued from November 7.

Wisconsin Public Service Commission

November 19: Hearing on complaint of Bertil Peterson et al against Wisconsin Telephone Co., Milwaukee, and Hartland Farmers Telephone Co., Esdaile.

November 20: Hearing on application of Hillsdale (Wis.) Western Telephone Co. for authority to increase rates.

November 20: Hearing on request of Cream Valley Telephone Co., Hawkins, for authority to make rate increases.

November 20: Hearing on application of Cuba City (Wis.) Telephone Exchange Co. for authority to abandon free service between Benton and Hazel Green.

November 22: Hearing on proposed extension of service by Skinner Telephone Co. to subscriber in Jordan, Green County.

November 22: Hearing on application of Liberty-Newton Telephone Co., Liberty, for authority to increase rates.

V V

World-Wide Communication Predicted by RCA Head

World-wide television networks and portable communications instruments enabling a person to communicate directly with anyone anywhere in the world were predicted by Brig. Gen. David Sarnoff, RCA prexy, at a dinner at Hotel Waldorf-Astoria, New York City, commemorating his 40th anniversary in radio.

Just returned from a tour of Europe, General Sarnoff described these and other similarly fantastic inventions as the alternative to rocket-propagated germs and atomic bombs in a third world war. Declaring that radio had become a great public servant in the U. S. because of the "freedom of science to advance," he called for an international ban on all restrictions on scientists' rights to "question, to experiment and to think."

Reviewing the rapid advances made by radio in the last 40 years, the RCA head said that scientists were still only pioneering in the dawn of the radio age. "Already the electron tube responds to our senses of touch, sound and sight," he said.

"We shall learn how to make it respond also to our senses of taste and smell. The tireless workers of radio science will produce a radio-mail system that will be inexpensive, secret and faster than any mail-carrying plane can travel.

"Portable communications instruments will be developed that will enable an individual to communicate directly and promptly with anyone, anywhere in the world. As we learn more about the secrets of space, we shall immeasurably increase the number of usable frequencies until we are able to assign a separate frequency to an individual as a separate telephone number is assigned to each instrument."

V V

Appoint Utilities Chief

DR. LAURENCE KNAPPEN has been appointed chief of the Utilities Section of the OPA's Transportation & Utilities Division, succeeding HARRY R. BOOTH who resigned recently to enter the private practice of law. Dr. Knappen has been serving as the division's chief economist. He is on leave from the faculty of Rutgers University. He formerly was connected with an investment company in New York.

V V

Translate Messages

Americans need no longer complain that they can't make Japanese understand their telephone messages. The Army November 9 began a translation service by which Yanks can dial a number and dictate a message to be relayed to a designated person.

V V

Telephones Cost $60 Per Year

To have a telephone, which is very difficult to get, installed in Tokyo, Japan, now costs $60, and $25, plus three cents a call, for one year's service.

Survey to Show Need Of Telephone Service

Ever since the old Tuscarora Valley Telephone Co. has discontinued telephone service in the valley stretching from Port Royal to East Waterford, that section of Juniata County, Pa., has been without telephone service. The United Telephone Company, which has been operating in the surrounding area, is making a house to house canvass to determine the prospect of installing its lines in this area.

A. J. Makibbin, manager of the Juniata County branch of the United Telephone company, said, in part: "The material situation has shown small improvement and we are not receiving poles and wire needed for such projects as Tuscarora Valley would be. There is a possibility, however, that materials may start coming through within the next several months and before winter sets in we would like to find out how much interest there is on the part of the residents of Tuscarora Valley in obtaining telephone service. In order to obtain this information we are starting a house to house survey from Port Royal to and including East Waterford. This survey will tell us how many people will take service and will permit us to determine if this extension of our system can be justified."

V V

Telephone Number Important To Airways Clerks

Pan American World Airways is telling its reservation clerks to "Get that lady's first name and get her number, too." Information required of a person making a reservation for an international flight includes, besides nationality and place of birth, full name and home telephone number.

In a memorandum, Pan American tells its clerks not to hesitate to ask her first name and where she can be called. As for her age—that is required on a form which the traveler fills out personally.

V V

Directs Display Lighting By Telephone

The correct lighting for the window displays in a store on New York's Fifth Avenue depends on teamwork by telephone.

After the window has been arranged, the display manager plugs a telephone into an outdoor outlet near the window where he can view the display from the sidewalk. The telephone connects him with an assistant stationed at an electric control panel inside the store. The assistant adjusts the lights in accordance with the display manager's telephone order.

For more than 45 years the famous STEPHENS Climbers have been exclusively manufactured by

Buckingham

of Binghamton

and in that time one objective has been constantly kept in mind—to maintain the same high quality standards established by Wilmot Stephens when he first forged climbers on a blacksmith's anvil almost a half century ago.

Extreme care is taken to provide safe, comfortable equipment, and every article is inspected to comply with the exacting requirements established by safety engineers.

Buckingham "Cushion Deluxe" Floating Tool Belt No. 58 is made from the best latigo and chrome leathers. It has the "rolled edge" feature that gives a cushion effect with the greatest comfort to the wearer. Rigidly tested for strength and safety.

Here's Why Buckingham Climbers are Safer — More Comfortable!

- Shank a perfect fit, shaped for comfort.
- Wide standing surface slightly rounded to fit foot.
- Round loop will not cut straps,
- Gaff is hammer-forged from special tool steel, set straight with body of climber and close to foot-piece, giving least strain to climber, and maximum comfort to lineman.
- Each climber tested for toughness and strength of gaff rivet.
- Each climber Parkerized (rust proofed) and lacquered.

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Material Shortages Fail To Stop This Independent

A splendid example of Yankee ingenuity was turned in by Donald F. Davison, president of the Ogden Telephone Co., Spencerport, N. Y., to give North Chili the first dial exchange in Monroe County of that state.

Constant demand for improved service and continued growth of the community convinced Mr. Davison that a dial exchange was desirable for the North Chili area. He placed an order for relay dial equipment from Stromberg-Carlson, got a promise date, and set about planning the small insulated building required for the new installation.

DONALD F. DAVIDSON (left) shows FRITZ HAUPT, assistant advertising manager of Stromberg-Carlson, where dial switchboard will be located in new North Chili, N. Y., exchange building.

Then his troubles began.

Balked in every attempt to purchase building materials or to secure a contractor, he struck on a scheme that paid dividends in time and money. With a helper he dug the foundation pit himself. Then from a temporary war building in nearby Spencerport, he obtained the concrete blocks for the foundation walls and laid them in true bricklayer fashion. Because the exchange was to be built on a steep grade he filled in the foundation with six feet of sand, shale and gravel and with the help of the village volunteer firemen hosed down the foundation for settling. They poured in hundreds of gallons of water before Mr. Davison was satisfied.

There were still no contractors available, but Mr. Davison knew a farmer with carpentry experience who was willing to undertake the task. The farmer-carpenter in turn hired Mr. Davison as his assistant. An old chicken house that could be purchased was torn down and yielded the necessary 2 x 4's for the uprights and crossbeams, as well as the necessary lumber for the scaffolding.

Another ancient landmark furnished the century-old bricks for the budding new exchange, as Mr. Davison and Edgar Ernst, the farmer-carpenter, turned their talents to masonry. By this time Mr. Davison was able to buy insulation which he and Mr. Ernst installed, glass bricks for the only window, shingles for the roof and a neat colonial door. As a finishing touch, they constructed a cupola ventilator in the center of the roof and topped it off with an insulator, erected plaster board paneling inside and awaited the dial equipment.

It was ready. After installation and cut-over, Mr. Davison held open house for the community, gave a luncheon for nearby telephone executives, and modestly accepted the plaudits of everyone.

New exchange building of Ogden Telephone Co. at North Chili, N. Y.

V V

S. M. Sherman Joins American Crossarm & Conduit Co.

S. M. Sherman, formerly supply sales manager of Automatic Electric Sales Co., Chicago, joined the American Crossarm & Conduit Co., Chicago, November 1 and has been appointed western sales manager, according to an announcement by A. H. Vorum, president of the American Crossarm & Conduit Co.

Following an inspection trip through the company's mill at Chehalis, Wash., Mr. Sherman will establish his permanent headquarters in one of the West Coast states. He and Mr. Vorum left for the Chehalis mill several days ago.

Mr. Sherman is well known in operating and manufacturing circles of the telephone industry, having been associated with the Automatic company for the last 12 years, much of which time he spent in the field.

During summer vacations while attending New Trier High School at Winnetka, Ill., and the University of Illinois, Mr. Sherman began his telephone work with the Illinois Bell Telephone Co., working in the outside plant department.

S. M. SHERMAN

After leaving school in 1930, Mr. Sherman spent four years in the shipping and investment fields and in 1934 became associated with the Automatic Electric Sales Co. Starting as assistant purchasing agent, he received rapid promotion in the purchasing and sales departments and was appointed supply sales manager in 1939, which position he held at the time he became associated with the American Crossarm & Conduit Co.

V V

E. C. Roys Joins General Telephone System, Madison, Wis.

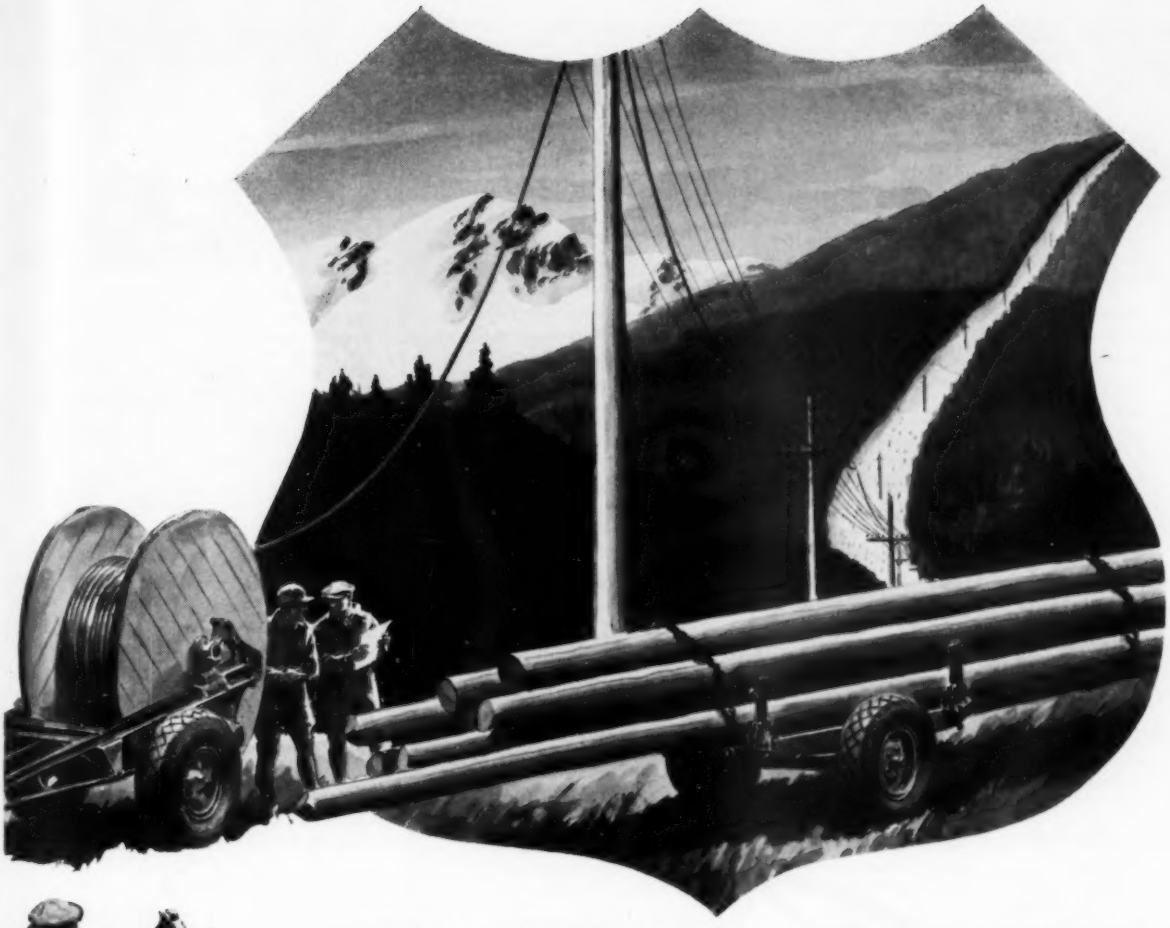
Maj. E. C. Roys, who recently returned from the Antilles, where he served with the U. S. Army Signal Corps, has joined the engineering staff of the Central Group headquarters, General Telephone System, at Madison, Wis. (TELEPHONY, November 9, page 31.)

Major Roys was division plant superintendent of Michigan Associated Telephone Co., a General Telephone subsidiary, before the war. He had been on active duty with the Signal Corps since June, 1943, and had been overseas since December, 1943. While overseas he was a member of the Special Staff at the Headquarters, Antilles Department, U. S. Army, San Juan, Puerto Rico, and was in charge of the Signal Wire Section of that department.

V V

OBITUARY

JOHN J. LYONS, senior accountant of the New York Public Service Commission until his retirement October 1 and an employe of the commission since 1909, died November 12. His age was 59.



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Highway Pole Trailers, Cable Reel Trailers, and Splicer's Trailers are ruggedly built to go wherever the line must go. Whether it's along a highway, across bottom lands, or over a mountain, these efficiently engineered, labor-saving vehicles move in and help make the job easier for all concerned.

They all travel behind other vehicles that are needed on the job —the Pole Trailer, for instance, may be hauled by the light truck which carries the Highway Earth Boring Machine and Derrick. Either or both the others will ride easily behind a Highway Construction or Maintenance Truck.

Before you order any new equipment, it will pay you to get full information on Highway Line Construction and Maintenance Bodies, Earth Boring Machines, Winches and Power Take-Offs.

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THANKSGIVING

By MAYME WORKMAN,
Traffic Editor of TELEPHONY

ON THIS Thanksgiving Day we find a great deal to be thankful for. First and foremost, we are at peace. That for which we so earnestly prayed, the return of world peace, has been vouchsafed us. The guns are stilled, the bombs gather cobwebs in their racks, our young men are back home. Truly we have much for which to be thankful.

But as we give thanks for the blessings of peace, we also earnestly should beseech Divine guidance as we undertake the responsibilities of peace. The fate of the world depends so largely on the American people in the next few years. It is our God-given role to shape it for weal or woe. May Divine Providence give us the wisdom and courage to accept the responsibilities we face, just as He gave us the peace for which we prayed.

Into our keeping has been placed a solemn and sacred responsibility. We are the stewards of world peace. While we humbly give thanks to God for the privilege that has been given us, let us pray from the depths of our being that we never may fail in our trust. Let us give thanks that we have the opportunity to make others thankful.

Much suffering and despair yet remain in the world. Many will be hungry, cold and weary in countries where "Thanksgiving Day" is unknown.

As we take our places at the festive board, let us do so in all humility, once more dedicating ourselves to the pilgrims' spirit of Thanksgiving, and thank God for the blessings He has bestowed upon us.

Lastly, may this season not only evoke thankfulness for that which we received in the past, but may it also be an occasion for solemn self-dedication in meeting the challenges of the future.

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...the

BIG 10-ROLL CAN of the BEST BUY IN TAPE

Off the market during the war, this handy 5 pound can of Gold Seal Tape is back again . . . the best buy for regular users. Every roll is doubly protected for factory freshness.

Whatever way you buy tape, you'll find Gold Seal always just right in "tack"; clean handling; non-raveling; non-peeling. Jenkins Bros. (Rubber Div.) 80 White St., New York 13.

Jenkins Bros. also make Diamond Seal Friction and Rubber Tapes which meet ASTM and Federal Specifications.

JENKINS Gold Seal Tape FRICTION - RUBBER

MADE BY JENKINS BROS. . . . MAKERS OF FAMOUS JENKINS VALVES

In recognition of his becoming the first Philco employe to serve the company for 40 years, GEORGE DEMP (left) is presented with the latest Philco radio-phonograph by M. W. HEINRITZ, vice president in charge of the Storage Battery Division. Mr. Demp joined Philco in 1906 and has worked in the battery division forming room ever since.

Cordage, Inc., Moves To New Location

Cordage, Inc., manufacturing affiliate of the Kellogg Switchboard & Supply Co., Chicago, on November 8 moved its manufacturing operations, laboratory and offices into buildings at 3520 W. Carroll Ave., Chicago, according to an announcement by C. D. Manning, president of the company.

The property was purchased last July 22 for proposed expansion by Cordage, Inc., which produces rubber-jacketed retractable cords for industrial and household applications.

V V

FWD's Safe Highway Project Begun at U. of Wisconsin

A five-year research project to promote safe, economic and efficient highway transportation has entered its initial phase during the current school year at the University of Wisconsin College of Engineering. The project, supported by a grant accepted in 1945 from the Four Wheel Drive Auto Co., Clintonville, Wis., is under the direction of Archie H. Easton.

Mr. Easton, who recently joined the university staff in order to take charge of the truck research project, has been on the staff of the Aberdeen Military Proving Grounds for the last five years. Prior to that time, he was employed in the research department of the United States Bureau of Standards.

At a meeting between university representatives and FWD officials shortly before the opening of the fall school session, an outline for the research project, including the objectives and the scope of study, was considered. Those from the university who met with the FWD officials were Dean M. O. Withey, College of Engineering; Frank O. Holt, Director of the Public Service Department; Mr. Easton, and the project committee consisting of

Lloyd F. Rader, chairman, Professor Patrick H. Hyland and Professor Kurt F. Wendt.

The primary objectives of the research project are to make basic studies of truck and highway design considering safety, economy and efficiency; to compare four-wheel drive trucks with single-axle drive trucks through experimental tests; to provide advanced study in the fundamentals and techniques of truck and highway design for safe, economic and efficient transportation and to make other miscellaneous studies.

Continuous investigations have been conducted for several years by Herman V. Larsen, FWD experimental engineer. Several of Mr. Larsen's experiments, particularly the turning circle tests, will be examined by the university researchers. Other investigation dealing with the efficiency of the four-wheel drive principle of propulsion were conducted by Purdue University and Iowa State University in 1930 and 1931.

V V

Wrong Number Solves Housing Problem

Maj. William Johnson's house-hunting search ended recently and he can thank a Dallas, Tex., telephone operator.

Major Johnson answered a long distance telephone call in his office in Anderson, Ind., and was astounded to hear someone give him the description of a house for rent. Before the caller learned he had been given a wrong number, Officer Johnson accepted the offer and rented the furnished five-room house.

V V

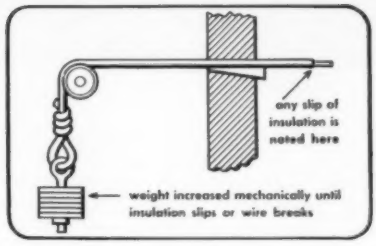
Associated Telephone Co. Buys Additional Properties

On November 1, the ownership of the telephone properties in the Downey, Calif., exchange was transferred from Consolidated Telephone Co., Whittier, to Associated Telephone Co., Ltd., Santa Monica, according to a joint statement issued by President C. F. Mason of the Associated company and President A. Wardman of the Consolidated company. (TELEPHONY, November 2, page 34.) Including the communities of Artesia, Bellflower, Downey and Norwalk, the exchange covers a total area of approximately 50 square miles with a population of about 70,000. It adjoins the north boundary of the Long Beach exchange of the Associated company.

This is the fifth property acquisition of Associated Telephone Co., Ltd., since it commenced operations as a telephone

TELEPRENE
DROPWIRE

ADHESION TEST



Specimen is wedged into solid body similar to method of fastening in field, then submitted to pull.

If adhesion is less than tensile strength of wire, the insulation will slip on wire.

This test proves conclusively that TELEPRENE will not slip in the supporting clamp due to the lack of Adhesion between Conductor and Insulation.

For other outstanding features of Teleprene see our bulletin *"The Story of Teleprene Drop Wire"*

TELEPRENE; the DROP WIRE with the NEOPRENE Synthetic Rubber Outer Jacket

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** Reg. Applied for, U.S. Pat. Office*

WB
THE WHITNEY BLAKE CO.
New Haven, Conn.
Well Built wires since 1899

Group of Downey exchange personnel

utility on September 1, 1929, with the consolidation of six original predecessor companies — Associated Telephone Co. (Long Beach and San Bernardino), Home Telephone Co. of Covina, Huntington Beach Telephone Co., Laguna Beach Telephone Co., Redondo Home Telephone Co. and Santa Monica Bay Telephone Co.

Mr. Wardman has been identified with the telephone properties in the Downey exchange since the days when telephone service first was made available in that area, and in later years he acquired ownership of those properties. In 1939 he combined his Downey Home Telephone & Telegraph Co. with his Whittier Home Telephone & Telegraph Co. to form the present Consolidated Telephone Co.

The Downey properties constitute about 40 per cent of the Consolidated company in terms of stations and investment. Of the 8,568 telephones in service on August 31, 1946, approximately 100 were privately owned. Toll service for the exchange is furnished by a switchboard in Downey owned and

Answers to Traffic Questions on Page 26

(1) This question is necessary, on an established connection, to determine which office is making a request.

(2) In some offices it has been found helpful to request an operator to report to the chief operator, or the supervisor in charge, when she is late, giving her reason for being tardy. A record is maintained showing the date, length of tardiness and the stated reason. If the tardiness is frequent, the chief operator talks to the operator at fault and tries to determine why this conditions exists.

Appealing to an operator's sense of fair play often is helpful, pointing out that another operator may be delayed in getting off duty due to her tardiness.

(3) The three most important abilities are courtesy, accuracy and speed in performing her work. An operator should strive to be efficient, open-minded to constructive criticism, willing to cooperate, develop a pleasing voice personality and cultivate the ability to get along with people, co-workers as well as customers.

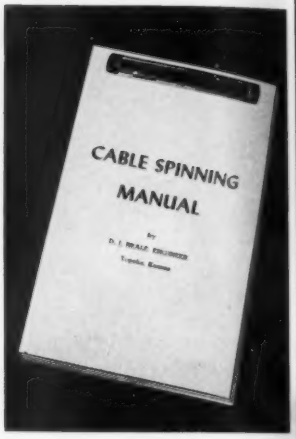
(4) We never should establish a connection to a busy line. We are permitted to interrupt conversation and ask for a busy line in handling an emergency call or a Priority 1 call.

(5) An operator should give the handling of an emergency call her undivided attention. Establish the connection as quickly as possible, and render any necessary assistance. As an overlapping operation, the operator should notify her supervisor or chief operator that she is handling an emergency call and the operator should not remove the plug from the answering jack until her supervisor or chief operator instructs her to do so.

A record of all emergency calls should be maintained in the central office. This record is made by the supervisor or chief operator.

STROMBERAR

the cable spinning manual



. . . is a treatise on cable spinning covering the use of the Neale Model "B" One-Man Spinner and also the Neale Model "B" Pull Type Spinner.

It also shows the various methods of placing cable previous to spinning and goes into some detail of cable splicing and trouble location on spun cables.

A very valuable pocket manual for all telephone men connected with cable work.

$.75 each.

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BRANCH OFFICES: CHICAGO 6

ERARLSON Recommends

prevent overtension with the

dillon dynamometer!

Available with calibrations from 500 lbs. to 20,000 lbs.

Your best protection against costly and troublesome wire failures due to overtension is the use of a handy and durable Dillon Dynamometer, the finest load measuring instrument of its type available.

Neither heat, cold, nor accidental overload affect the accuracy of its readings. It may be used in any position, with the load applied from any angle. It permits immediate readings on the job, with a minimum amount of time and trouble.

- Dial easy to read even at a distance.
- Commercial tolerance guarantee is 2 per cent. plus or minus *full scale reading.*

habirshaw no. 17 bronze drop wire

NO. 17 BRONZE PARALLEL NEOPRENE SHEATHED DROP WIRE

NO. 17 BRONZE TWISTED PAIR NEOPRENE SHEATHED DROP WIRE

Stromberg-Carlson offers these two new Drop Wires with five important features:

1. High Dielectric Strength.
2. Flame-Resistant—Sheath will not conduct flame.
3. Weather-Resistant—No exterior braids to weather and festoon; impervious to effects of moisture, acids, oils, and factory fumes.
4. Mechanically Strong.
5. Time-Tested.

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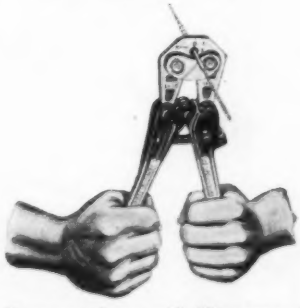
make line splices faster with nicopress splicing sleeves . . .

For line splices that *can't* pull out, made in half the time, specify *Nicopress* Splicing Sleeves!

Nothing could be simpler than making a splice in a jiffy with *Nicopress* equipment. Here's all you do:

1. Clean the wire end

2. Insert wire in sleeve



3. Compress sleeve with *Nicopress* tool

The result is a splice that will hold up for the life of the wire. Specify *Nicopress*—the finest in Splicing Sleeves!

STROMBERG Telephone CARLSON

There are **NO FINER**
LINEMEN'S PLIERS *than these*

BERNARD Heavy Duty Linemen's Side Cutting Pliers are made to take the hardest wear and tear. They pass the "drop" test without damage and meet the quality requirements of utilities throughout the country. *Order through your local distributor.*

Wm. Schollhorn Company
50011-A Chapel Street
New Haven 9, Conn.
"QUALITY TOOLS SINCE 1870"

BERNARD

operated by Southern California Telephone Co.

The purchase price arrived at for the Downey exchange is somewhat in excess of $1,050,000, all of which will be reinvested in the telephone plant for the Whittier exchange within the next two years, according to Mr. Wardman. Present engineering estimates indicate that telephones in service in the Whittier exchange will equal those now in service in the entire present Consolidated system, including the Downey exchange, within the next five years.

At a dinner party given on November 1, Downey personnel were given the opportunity of meeting the officers of their new employer and bidding farewell to Mr. Wardman and his associates. Most of the employes were transferred to the Associated company to continue in their former status.

V V

U. S. Honor Presented to Bell Telephone President

The United States War Department's Certificate of Appreciation was presented to Frederick Johnson, president of the Bell Telephone Co. of Canada, in a ceremony held in the Beaver Hall Building Auditorium recently. Mr. Johnson is the first Canadian to receive that award, the second highest granted by the department.

Col. Terence J. Tully, of the War Department, Washington, D. C., made the presentation on behalf of Robert P. Patterson, U. S. Secretary of War, "for outstanding services rendered the U. S."

V V

Telefon Fabrik Has New Operator's Micro-Telephone

Operators' head micro-telephones have been designed to replace the old fashioned operator's headset with breast place transmitter and head receiver. A new headset of this type has been marketed by Telefon Fabrik Automatic, Copenhagen, Denmark. The new set weighs only 4½ ounces and does not sacrifice transmission efficiency, the company states.

This new micro-telephone headset may be adjusted to the head of the operator and the relation of the mouthpiece to the mouth does not change with any movement of the head.

The micro-telephone consists of three main parts: The transmitter receptacle with one half of the microphone arm, the receiver receptacle with a mounting plate and the other half of the microphone arm, and a wire frame with disc. The receiver receptacle is of aluminum and is divided into two parts by the mounting plate. In the receptacle,

means is found to adjust the position of the transmitter arm.

The two parts of the transmitter arm slide into one another and the length may be adjusted by about one inch. The micro-telephone may be placed on either the right or left ear. The wire frame should rest on the middle of the head and the disc placed above the other ear. The transmitter arm is adjusted so that the transmitter is set at a distance of about 2/5 in. from the corner of the mouth. Transmission efficiency is best in this position as the operator should talk at the side of the transmitter and not directly into it.

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The proved and standard Protection for Underground Telephone Cables.
Cheapest in the long run. Highest quality and a full line of shapes.

National Fireproofing Corp.
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PITTSBURGH, PA.

"Foneholders" Sent Free To Amputee Veterans

A Chicago manufacturer is sending free to all veterans who lost one or both arms in the war a plastic attachment for a telephone which permits them to rest the receiver on their shoulder.

F. D. Mayer, president of the Reyam Plastic Products Corp., 1525 E. 53rd St., said he already has mailed more than 500 of the "Foneholders" to veterans in all parts of the country.

Amputee veterans can get a free "Foneholder" by sending their name and address to Mr. Mayer at his plant.

V V

But Can They Talk Back To the Announcer?

Two Dayton, Ohio, inventors, T. B. Fordham and T. W. Moore, have taken advantage of the fact that the vacuum-tube hookup and battery equipment in a hearing aid are quite similar to those in a portable radio receiving set to combine both functions in one instrument, on which they have received a patent.

When he has no need for conversation, the user need not feel he is lugging around a bothersome burden; he can, at a twist of a dial, summon any entertainment or news that may happen to be on the air.

V V

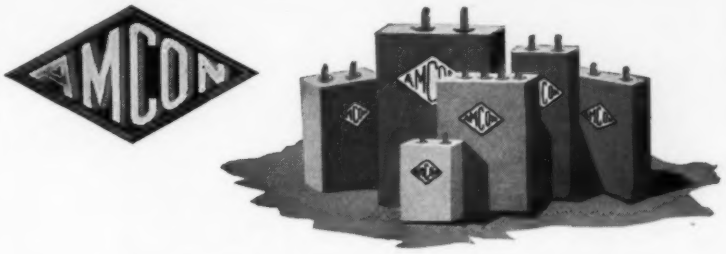
Kellogg Displays Mobile Radio-Telephone

At a recent convention of the United States Independent Telephone Association in Chicago the Kellogg Switchboard & Supply Co., Chicago, displayed the first models of its new FM mobile radio equipment.

The model consists of an FM mobile transmitter and receiver, a handset-signalling unit, junction box assembly and a dial operated selective calling unit, the latter for use in the central office of the telephone company. Included in the mobile receiver is a selective signal circuit set to respond to pulses sent out by the selective calling unit in the central office.

The operation of the equipment, as explained by company representatives, includes several novel features. The selective calling circuits permits the selection of any one of a possible total of 84 mobile units by the central office operator.

Whereas all of the mobile units can be considered to be on a "single party line," this unusual circuit, nevertheless, assures absolute privacy inasmuch as all units except the one called are inoperative both for receiving and trans-



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SPECIFICATION SHEETS ON REQUEST

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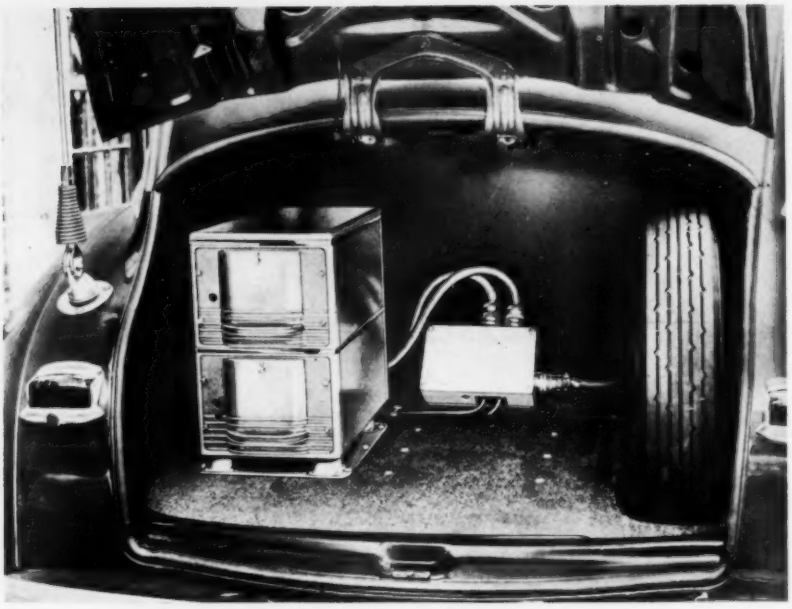
4410 No. Ravenswood Ave., Chicago 40, Ill.

". . . calling Officer Cuthbert! Bring in mad elephant doing damage in Spongoola village! That's all!"



View showing the rear deck installation of the new Kellogg radio-telephone equipment in a 1946 Plymouth sedan.

mitting. Upon completion of a call, the central office operator restores all units to normal operating condition through a key at her switchboard position.

The mobile handset unit is equipped with a "busy" light, making it unnecessary to pick up the handset to determine whether the circuits are busy. The handset itself is equipped with a push-to-talk switch which operates the antenna changeover relay and connects the plate supply voltage from the dynamotor to the final output tube. Since the removal of the handset from its holder immediately starts the dynamotor, talking and listening are free of the annoyance of noise associated with circuits in which operation of the push button controls starting and stopping of the generator.

Another feature of the unit is the extremely low current consumption from the storage battery when on standby approximating that of the average broadcast-type automobile receiver. Aircraft shock-proof mounting of the receiver and transmitter avoids damage to tubes and other components when the car is on rough roads.

TELEPHONE HABITS

Vacuum cleaners now are tops,
So are sweepers, also mops—
Yet many people have been known
To get more dirt by telephone.

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C. M. Christiansen Co., Phelps, Wis.—Northern White Cedar Poles, plain or butt treated.

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T. M. Partridge Lumber Co., Minneapolis, Minn.—Northern White—Western Red Cedar Poles. Plain or butt-treated.

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